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No. 8

GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

# MONTHLY REPORT

## DECEMBER, 1938

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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

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## December, 1938

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# MINISTRY OF AGRICULTURE

# MONTHLY REPORT

## DECEMBER, 1938.

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Adverse weather conditions continue seriously to retard farm work, and seasonal operations are now getting heavily in arrear. Unfortunately, too, there does not seem to be any possibility of an immediate improvement with the land in such a water-logged state, and daylight hours, usually none too bright with heavy clouds, shortening appreciably with the close of the year.

The weather during the past months has certainly been very unseasonal, and consequently farming generally has suffered a setback from its vagaries.

The one bright feature of November was the improvement in the cattle trade, and even though this was to be expected from the normal seasonal trend it is something to be thankful for, more especially since prices, although lower than at this time last year, are by no means unsatisfactory, and an increased proportion of Northern Ireland fat cattle are now qualifying for the quality subsidy of 7/6d. per cwt. Some figures in respect of the working of the Livestock Industry Act, 1937, during the period August to October last, are compared with the corresponding period of 1937, which marked the first quarter for which gradings, as revised under the Act, are comparable.

The special article on page 431 deals with the Ministry's Exhibit staged at the British Empire Exhibition, which closed at the end of October last, after completing its scheduled period of six months' duration. Mr. Askew, the Ministry's Exhibition Officer, has dealt very comprehensively with this subject, and the report should prove of considerable interest to readers and remove whatever doubts may still exist as to the need for continued vigilance to ensure that only produce that is of first quality and marketed in an attractive manner is sent "across the water". Those who have raised the question of the general usefulness of such exhibits, and this one in particular, are also indirectly answered in this report.

# AGRICULTURAL CONDITIONS.

## AGRICULTURAL CONDITIONS AT 1st DECEMBER, 1938.

Another month of extremely inclement weather has prevented farmers from making any appreciable progress with field work. Rain fell heavily almost every day last month and the accompanying strong winds on numerous occasions added to the severity of the outdoor conditions. Temperatures which were on the mild side in the early part of the month fell later and towards the close of November several sharp ground frosts were of widespread occurrence and falls of sleet and snow were reported from a few hilly inland districts.

Although there were a few dry days throughout the month the water-logged state of the land prevented these opportunities for field work being availed of to the full extent. Consequently farmers made little or no further progress in clearing up arrears of harvesting work, and such seasonal work as ploughing and the sowing of winter wheat was also, perforce, left undone.

After such a long, wet, and stormy period it is now very questionable whether the crops of corn still in the fields will be worth anything even if conditions soon improve sufficiently to permit them being gathered in. As mentioned in the November report a considerable amount of the oat crop had still to be harvested at the beginning of that month, and since then only very slight progress was possible with this work. It is now feared that heavy losses will have accrued from the abnormally wet weather of the past three months. Already heavy damage is evident in many fields where oats, still in stooks or in huts—or what remains of them—are rotting or showing signs of growth. Farmers in these areas will therefore have to write off heavy losses on this account. Similarly in regard to the potato crop an unusually large part of which is still in the ground, little progress was possible with lifting last month on account of weather and ground conditions, and on heavy and retentive soils it is feared the tubers will suffer heavy damage.

As stated, ploughing work was delayed further and consequently very little winter wheat has been sown. It is learned that some farmers have now changed their intentions in regard to growing this crop, and less winter wheat will be sown this year than last, chiefly on account of the weather although prices also have been discouraging. Other seasonal work such as the harrowing of pasture lands, the application of lime and phosphatic manures, and the carting of farmyard manure has been held up and all field work is stated to be now from one to two months in arrear.

Well drained pasture lands have remained remarkably fresh and with the general absence of severe frosts growth has suffered little check. There is yet a fair amount of "keep" available on well managed pastures but the nutritive value has been reduced by the excessive dampness whilst with ground conditions generally sodden pastures are being poached by the treading of the cattle. The application of lime and of phosphatic manures to pastures has been restricted to an appreciable extent chiefly by the weather but it is also understood that economic considerations brought about by the fall in agricultural prices and the crop losses likely to result from the adverse weather, since the end of the summer have tended to decrease the commitments of farmers in regard to purchases generally. Some farmers have had the lime carted to the fields where it remains in heaps awaiting a favourable opportunity for spreading. The use of basic slag, also encouraged by the Land Fertility Scheme, appears to be rather more restricted than formerly, for the reasons stated.

Supplies of home-grown foods for feeding to livestock are generally plentiful but the quality is somewhat variable. It is understood that the feeding of grain is being done on a larger scale than usual on account of the low prices ruling for wheat, oats and barley. In some late districts fears of a shortage of fodder crops are likely to be realised unless the crops remaining to be harvested are saved in reasonably good condition soon. With the delay in threshing work and the possibility of the produce deteriorating meantime some farmers have been feeding the unthreshed sheaves of oats to their cattle. The position of purchased foodstuffs is generally satisfactory and prices declined further last month in sympathy with the trend of prices for home-grown foods.

The condition and health of livestock continue reasonably good. Outliers have suffered somewhat from the excessive dampness and the recent cold spell has checked their development, whilst the adverse weather has caused some ill health among dairy herds. Seasonal outbreaks of disease, however, have been comparatively slight in extent considering the very adverse conditions so long prevalent this season, and are confined chiefly to "hoose" in cattle and footrot in sheep.

## THE CROPS.

WHEAT.—Adverse weather conditions have resulted in very little progress being made with ploughing and consequently the sowing of winter wheat has been confined to a very small area. The poor demand for seed wheat reflects the general hold up in this work and now that it is heavily in arrear it seems likely that the extent of this crop will be seriously curtailed this year.

Threshing operations continued to be retarded by the wet conditions and this work is generally behind time, and in some districts the bulk of the crop has still to be threshed. Yields obtained last month were generally up to average dimensions and the quality was moderate. In those cases where the crop lay a long time in the stook the quality of the grain, however, is inferior. Estimates of the yields of grain obtained from November threshings ranged from 18 to 25 cwt. to the acre.

Feeding wheat was selling at from £5 to £6 per ton and increasing supplies at markets ranged in price from 5/6d. to 6/6d. and averaged 5/10¾d. per cwt.

Oats.—In those late districts where some of the crop is still in the fields in stooks or in huts it is clear that heavy losses will have resulted from the rains and storms: it is reported that in these areas as much as a quarter of the entire crop is in danger of being lost and that rotting and growing in the huts is prevalent generally.

Progress with threshing varies with the district but, all over, increasing quantities were being threshed although the work was slowed up considerably by the unfavourable weather. The yields obtained were generally above last year's level and estimates range from 20 to 24 cwt. of grain and from 30 cwt. to 2 tons of straw to the statute acre. The quality on the whole is rather less satisfactory, although in some cases it is quite good. The many poor samples obtained of late have reflected the very bad weather conditions under which the crop was saved.

Increased supplies of the new crop marketed last month were on average 1½d. dearer on the month at 5/4d. per cwt., whilst for the larger quantities of oat straw marketed the average price hardened slightly by 5d. to 42/3d. per ton. It is understood that on account of the low prices ruling for oats farmers are using the grain and straw to an increasing extent for feeding to livestock.

Barley.—Very little progress was possible with the threshing of this crop and most of this work is yet to be done. Good yields of medium quality grain were reported from a few districts.

Not much barley is being sold but the demand for barley for feeding is showing signs of recovery. Barley for this purpose was selling at round £5 per ton, while grain for malting was fetching about £7 per ton.

Flax.—Scutching was more general last month and in most districts is now in full swing. The yields of fibre were variable but in most cases rather disappointing and the quality too was only poor to fair.

Greatly increased quantities were marketed last month and prices ranged from 7/6d. to 11/0d. and averaged 9/3d. per stone, or ¼d. more than last month's average price.

POTATOES.—The continuance of bad weather and soil conditions held up lifting operations last month, and a much larger proportion of the crop than usual remains in the drills.

Except in light soil areas where average crops of good quality are reported, the yields of good quality potatoes have been considerably reduced by the excessively wet conditions. Flooding will seriously reduce yields in some districts. Some reports have been received to the effect that rotting is causing considerable damage in the pits and stores, whilst blighted tubers are also a common source of complaint, especially in the white varieties, and there were also complaints of tubers in storage starting to "strike". It is feared that these faults may eventually reduce the yield of potatoes by as much as one ton per acre. Of the principal varieties grown in Northern Ireland Arran Victory seems to have been the least affected by blight disease this season.

Supplies of ware varieties were variable and demand was poor at low prices. The quantities at the local markets were somewhat heavier on the month but prices for all varieties were further reduced. All classes of the main crop cheapened by 4d. to 2/5½d. per cwt., and the principal variety, Arran Victory, was 6d. easier at 2/4¾d. per cwt., while Kerr's Pink fell sharply in price by 8¾d. per cwt. Small supplies of British Queen continued to be marketed and the average quotation for these was down by 9d. on the month at 2/1d. per cwt.

The weekly shipments over the past month and recent shipping prices are given hereunder:—

SHIPMENTS OF POTATOES FROM NORTHERN IRELAND TO GREAT BRITAIN.

| *Week ending* | *Tons* | *Week ending* | *Tons* |
|---|---|---|---|
| 26-11-38 .. | 2,135 | 27-11-37 .. | 4,979 |
| 19-11-38 .. | 2,234 | 20-11-37 .. | 3,635 |
| 12-11-38 .. | 1,719 | 13-11-37 .. | 4,672 |
| 5-11-38 .. | 1,613 | 6-11-37 .. | 4,068 |

The prices per ton paid by shipping merchants for the week ended 3rd December, 1938, were again slightly firmer on the week and ranged as follow:—

WARE.

| | Bagged. | | Loose | |
|---|---|---|---|---|
| | £ s. d. £ s. d. | | £ s. d. £ s. d. | |
| Up-to-date .. | 2 0 0 to 2 5 0 | | 1 15 0 to 2 0 0 | |
| Arran Banner .. | 1 15 0 ,, 2 0 0 | | 1 15 0 | |
| Arran Victory .. | 1 15 0 ,, 2 0 0 | | 1 15 0 | |
| Kerr's Pink .. | 2 0 0 ,, 2 5 0 | | 1 15 0 to 2 0 0 | |
| Majestic .. | 2 0 0 ,, 2 2 6 | | | |

SEED.

| | Bagged | | Loose | |
|---|---|---|---|---|
| | £ s. d. £ s. d. | | £ s. d. £ s. d. | |
| Up-to-Date .. | 4 0 0 to 4 5 0 | | 3 0 0 to 3 10 0 | |
| Majestic .. | 3 5 0 | | | |

MANGELS.—This crop which is not grown very extensively in Northern Ireland has nearly all been lifted and stored. Yields generally were good and quality satisfactory.

TURNIPS.—This crop, generally speaking, is in fairly good condition. Good average yields are expected but it is feared that the quantities of sound turnips may be seriously reduced by the attacks of crown rot, canker and mildew which have been rather prevalent. An abundant growth of weeds is another result of the damp conditions and some crops are badly infested. On some farms in light soil districts the weather has had little adverse effect and average yields of good quality roots are expected.

CABBAGE AND KALE.—These crops are in good condition and heavy yields of sound and healthy plants are anticipated. A few cases of rot are, however, reported from heavy soil districts. Frost has as yet done little damage. Good supplies of kale should be available on farms where it is grown to provide green food for stock during the winter.

HAY.—The threshing of seeds hay has been practically completed. Yields have been on the light side this season and the quality of the seed is only fair on he whole. Prices for seed exceeded the high levels of the previous month and much larger supplies of Italian ryegrass seed at markets were dearer by 6/0¼d. at 22/8¼d. per cwt., while the slightly smaller quantities of Perennial were on average 1/9¾d. dearer at 20/6d. per cwt. Decreased offerings of mixed seed were also dearer and the average price hardened on the month by 1/10d. to 13/8½d. per cwt. These quotations are much above those ruling in recent seasons and should more than compensate for the rather disappointing yields.

Supplies of hay were larger in November than in the previous month but were still rather on the small side for the time of the year. The average quotation for the new crop upland hay was 2/4d. dearer at 58/7d. per ton, while meadow hay was cheaper by 11d. at 41/8d. At Belfast small quantities of last year's upland hay continued to be sold at an unaltered price of 73/0d. per ton.

## LIVE STOCK.

CATTLE.—The health and general condition of store cattle last month were normally good but the more severe weather towards the end of the month was beginning to show its effects on the animals. "Hoose" has been fairly common and colds, too were fairly prevalent.

The majority of the cattle being fattened have now been housed for finishing and the relatively few animals remaining on grass are being liberally hand fed. Supplies of beef cattle are normal and the animals being stall-fed are thriving satisfactorily, but some cattle out on grass are tending to deteriorate in condition.

Dairy cattle were generally maintained in good health but the usual cases of sterility and abortion occurred and colds were common. The milk yield showed an appreciable seasonal decline in some districts.

Good supplies of stores cattle were forward at fairs during November and demand and prices improved. Dairy cattle were in small to medium supply and recent prices were well maintained.

Sheep.—The health of flocks during November remained normally good. Foot rot was fairly prevalent but was scarcely as troublesome as might have been expected in so wet a season. Liver fluke disease has not yet appeared to a serious extent but, as butchers report an increasing number of flukes in the livers, precautionary measures are indicated. See Seasonal Farm Notes, page 453.

Supplies at fairs were variable and while the demand, generally, was quiet prices for the better qualities improved towards the end of the month.

Pigs.—Average numbers of young pigs were offered at fairs held during November where the enquiry remained fairly steady and prices were more or less maintained at recent satisfactory levels. Demand was good for small to medium supplies of breeding sows and prices per head were little altered at from £5 to £11, according to quality.

Weekly returns of (1) shipments of live pigs to Great Britain, and (2) purchases of dead and live pigs for curing in Northern Ireland last month are compared hereunder, with corresponding details for 1937 in brackets.

| Week ended | (1) Shipments to Great Britain | | (2) Bought dead and alive for curing in Northern Ireland. | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | | | Dead | | Alive | | | |
| 5/11/38 | 2,479 | (2,310) | 9,358 | (10,980) | 5,944 | (3,770) | 17,781 | (17,060) |
| 12/11/38 | 2,827 | (2,482) | 9,181 | (9,629) | 5,191 | (3,560) | 17,199 | (15,671) |
| 19/11/38 | 3,850 | (3,302) | 7,957 | (8,754) | 5,215 | (3,411) | 17,022 | (15,467) |
| 26/11/38 | 6,933 | (4,010) | 6,517 | (8,672) | 5,031 | (3,117) | 18,481 | (15,799) |
| 3/12/38 | 8,020 | (3,924) | 6,087 | (8,468) | 4,307 | (3,357) | 18,414 | (15,749) |
| 48 weeks ended 3/12/38 | 96,234 | (126,715) | 427,726 | (427,337) | 174,586 | (128,640) | 698,546 | (682,692) |

Horses.—In most districts trade for farm horses remained dull and prices tended to ease slightly. Prices for good useful horses generally ranged from £25 to £40 per head, with the best animals making up to £50. Foals fetched from £8 upwards according to quality. Six-quarter-olds made around £15 and three and four year old horses made from £25 to £30 per head.

Milk.—The wet weather has had a detrimental effect on the milk yield which showed a further decline on the month. Supplies were rather below the usual level for the time of year. Prices paid by creameries for

milk delivered ranged from 4½d. to 5¾d. per gallon, the separated milk being returned to the farmer. The rate of equalisation payment for milk produced in Northern Ireland and delivered to the creameries for manufacturing purposes has been determined at 1.31d. per gallon for the month of October, 1938, in accordance with the Milk and Milk Products Acts (Northern Ireland), 1934 to 1938.

It should be noted that under the regulations creameries are required to distribute the equalisation payment in accordance with the butter-fat content of the milk received from each supplier.

## THE COST OF LIVING INDEX FIGURE.

The cost of maintaining unchanged the pre-war standard of living of working-class families at November 1st, was approximately 56 per cent. over the level of July, 1914, compared with 55 per cent. at October 1st, and 60 per cent. at November 1st, 1937.

At November 1st the index of retail prices of food in Great Britain and Northern Ireland, as ascertained by the Ministry of Labour, was 40 per cent. above that of July, 1914, as against 39 per cent. at October 1st and 46 per cent. a year ago. The upward movement was mainly due to seasonal increases in the prices of eggs, while milk also was frequently dearer. Prices of potatoes, flour, bacon and butter were, however, slightly lower.

## THE MARKETS DURING NOVEMBER.

At the markets last month supplies of the principal home-grown vegetables were generally larger, cabbage being the only vegetable in shorter supply than in October. Price movements generally indicated a slightly easier tendency. The average price of cabbage was ¼d. cheaper at 1/2¾d. per dozen, and savoys cheapened by 2d. to 1/2d. per dozen, leeks by 1d. to 4d. per bunch, parsley by 1½d. to 4d. per bunch, carrots by 1/1¾d. to 8/1¼d. per cwt., and parsnips by 6d. to 5/- per cwt. Cauliflowers, however, were unchanged in price and averaged 1/6d. per dozen, and garden turnips were firm at 1/5d. per cwt. In the provision section supplies of both farmers' print and lump butter were much less plentiful than in October. The average price of print firmed by ½d. to 1/2¾d. per lb., while lump was unchanged in price at 1/1d. per lb. Hen eggs were in shorter supply. Prices as fixed by the Ministry of Agriculture from week to week had a downward trend.

In the poultry markets there were slight increases in the numbers of hens, chickens and ducks. Chickens were 1¾d. dearer at 2/3d. each, while hens and ducks were firm in price at 1/7d. and 2/5d. each respectively. The prices per lb. live weight paid by wholesale merchants showed no appreciable

change on the month, and ranged from 6d. to 8d. for chickens, 4d. to 6d. for hens and ducks, 8d. to 10d. for turkeys, and 4½d. to 5d. for geese. There were smaller quantities of unwashed wool marketed during the month, and long wool was ¼d. dearer at 6¾d. per lb., and mountain ½d. dearer at 6d. per lb.

## MARKETING OF EGGS ACTS (N.I.) 1924—1937.

The following table shows the prices fixed by the Ministry, and payable by licensed wholesale dealers, for eggs purchased from producers during the following weeks, as compared with the average prices at markets for the corresponding weeks of 1937.

| Week ended | 1938 | | 1937 | |
|---|---|---|---|---|
| | Hen eggs per lb.* | Duck eggs per dozen.* | Hen eggs per lb. | Duck eggs per dozen |
| | s. d. | s. d. | s. d. | s. d. |
| November 5th .. .. | 1 4 | 1 6 | 1 2¾ | 1 5½ |
| ,, 12th .. .. | 1 3½ | 1 5 | 1 3 | 1 6 |
| ,, 19th .. .. | 1 2 | 1 5 | 1 3½ | 1 7 |
| ,, 26th .. .. | 1 2½ | 1 5 | 1 4 | 1 7½ |
| December 3rd .. .. | 1 1 | 1 5 | 1 4¼ | 1 8 |

*Where hen eggs are delivered by the producer to the packing store of a licensed Wholesale dealer of Class A an additional ½d. per lb. is payable; in the case of duck eggs an additional ¼d. is payable for each complete dozen so delivered.

Payment on a quality basis came into operation during the week ended 5th March, 1938.

The following were the standard deductions :—

Hen eggs : "Seconds" and soiled eggs ½d. per egg, rejects 2d. per egg up to and including week ended 12th November; during the weeks ended 19th and 26th November, 1¾d. per egg, and for the week ended 3rd December, 1½d. per egg.

Duck eggs : Rejects, 1½d. per egg.

# EXTENT AND PRODUCE OF THE HAY CROP IN NORTHERN IRELAND IN 1938.

The total yield of the Hay Crop in Northern Ireland in 1938 is estimated at 824,989 tons as follows:—First Year's Hay 203,566 tons, Second and Third Year's Hay 140,573 tons and Permanent Meadow 480,850 tons. The estimated average yield of the entire crop at 1.9 tons per statute acre is similar to that of 1937, and is 0.1 tons per acre higher than in 1936. The average yield for the ten years 1928-1937 amounted to 1.8 tons per statute acre.

The following table shows the extent in statute acres, the estimated total produce and the average estimated yield per statute acre in the year 1938, with comparative figures for 1937 and the ten years period 1928-1937:—

## HAY.

| | 1st Year's | | | 2nd and 3rd Year's | | | Permanent Meadow | | | Total Hay | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Acreage | Average Yield | Total Produce | Total Acreage | Average Yield | Total Produce | Total Acreage | Average Yield | Total Produce | Total Acreage | Average Yield | Total Produce |
| | acres | tons | tons | acres | tons | tons | acres | tons | tons | acres | tons | tons |
| 1938 .. .. | 124,072 | 1.6 | 203,566 | 85,944 | 1.6 | 140,573 | 220,721 | 2.2 | 480,850 | 430,737 | 1.9 | 824,989 |
| 1937 .. .. | 124,307 | 1.7 | 210,076 | 88,023 | 1.7 | 146,264 | 218,416 | 2.2 | 477,056 | 430,746 | 1.9 | 833,396 |
| Average for the 10 years 1928-1937 | 136,118 | 1.6 | 223,092 | 84,279 | 1.6 | 133,726 | 227,169 | 2.0 | 455,510 | 447,566 | 1.8 | 812,328 |

# CHRISTMAS POULTRY.

According to the sample census taken by the Ministry at the 1st October last, there was a decrease in the number of turkeys since the 1st June, when the annual census was taken, which was of a much larger extent than that recorded in the similar period of last year. In view, however, of the increase in the number of turkeys recorded at the 1st June last, amounting to 8½ per cent of the 1937 total, the heavy losses which appear to have occurred since that date have not reduced the total number of birds to below the 1937 figure at this time, and no shortage of supplies is likely this Christmas. This fact is borne out by a further estimate made within recent weeks of the supplies available for the coming season; the majority of the reports obtained in this instance indicate that the supply position shows no material change over the greater part of the country, even allowing for the considerable losses which occurred among the later hatched turkeys during the very wet and inclement weather experienced during the summer and autumn months. Also, it is understood from recent accounts that although the excessively damp conditions retarded the development of a number of the later hatched birds which survived, the quality of this year's turkeys will be as good, if not better, than last year; and this appears to be especially true in regard to the early hatched birds.

The lower costs of purchased meals this year, as compared with last year, have helped breeders very considerably in offsetting the effects of the unfavourable weather conditions, whilst the low prices obtaining for home-grown produce, such as grain and potatoes, have been taken advantage of to produce birds of a high standard of quality and finish this season. This is a most promising state of affairs in view of the likelihood of increased competition in the British markets this season. In this connection it is expected that supplies from Continental countries will be heavy, and that those from Eire will show an increase in view of the removal of tariff restrictions brought about by the Anglo-Eire Agreement. Northern Ireland breeders will, therefore, need to make the utmost effort to market their birds in first-rate condition and finish so as to command top prices.

In regard to the position of supply of home-bred turkeys in Great Britain the estimated number in England and Wales at 4th September last was down on the year by about 2¾ per cent., but the increase recorded for Scotland would appear to be sufficient to offset this slight decline. In Eire it seems likely that the number of turkeys this year will be much the same as last.

While the bulk of imports of turkeys into the United Kingdom arrive in the month of December, it is interesting to compare the imports up to that month this year with those for the corresponding period in 1937. These show

that although there were larger seasonal increases recorded during the past two months than in 1937, the total figure up to the end of November was only very slightly above that for the eleven months of last year.

In December of last year nearly 164,379 cwts. of dead turkeys were imported ino the United Kingdom compared with 159,238 for the same month of 1936, and the former figure represents more than double the quantity imported up to the end of November this year. It seems likely, therefore, that at least this quantity will be imported during the present month. The principal supplying countries were Hungary, Argentina, Uruguay and Yugoslavia in the order named. Empire sources sent comparatively small quantities up to the end of November, and the countries principally concerned were Eire, Canada and Australia.

The prices paid by wholesale merchants to producers in Northern Ireland this season have ranged from 8d. to 10d. per lb. live weight for turkeys, and from 4d. to 5½d. for geese. Recent quotations for dead poultry at English centres showed that turkeys are cheaper this year than at this time last year. The average prices (wholesaler to retailer) as quoted in the Agricultural Market report of the 9th December were:—

| Description. | Bristol. | | Liverpool. | | London. | |
|---|---|---|---|---|---|---|
| | 1st qual. | 2nd qual. | 1st qual. | 2nd qual. | 1st qual. | 2nd qual. |
| | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| **Dead Poultry** (per lb.) | | | | | | |
| Chickens, British, Surrey .. | 1 2 | 1 1 | — | — | 1 4 | 1 3 |
| ,, ,, Other .. | 1 0 | 1 0 | 1 0 | 0 11 | 1 0¾ | 0 11¾ |
| ,, Northern Irish .. | — | — | 1 0 | 0 11 | 1 2 | 1 0 |
| ,, Eire .. .. | — | — | 1 0 | 0 11 | 0 11 | 0 10 |
| Ducklings, British .. | 0 11 | 0 8 | 0 10 | — | 1 0½ | 0 11½ |
| ,, Northern Irish .. | — | — | 0 10 | — | — | — |
| ,, Eire .. .. | — | — | 0 10 | — | — | — |
| Geese, British .. .. | 0 11 | 0 9 | 0 8 | — | — | — |
| Turkeys, British .. .. | 1 4 | 1 3 | 1 2 | 0 11 | — | — |
| ,, Northern Irish .. | — | — | 1 2 | 0 11 | — | — |
| ,, Eire .. .. | 1 2 | 1 1 | 1 2 | 0 11 | — | — |
| ,, Argentine .. | — | — | 1 2 | — | 1 0½ | 0 9½ |
| ,, Hungarian .. | 0 10 | — | 0 10½ | — | 0 10 | 0 9 |
| ,, Polish .. .. | — | — | 0 10½ | — | — | — |

At the London Central Markets on 14th December, 1938, prices for dead turkeys ranged as follows:—

| | |
|---|---|
| South American .. .. | 9½d. to 1/0½ per lb. |
| Hungarian .. .. | 9½d. to 10½d. per lb. |
| Irish .. .. | 11d. to 1/1 per lb. |

# EMPIRE EXHIBITION, GLASGOW, 1938.

The following is a general report on the Exhibition which concluded on the 29th October, 1938, received by the Ministry from Mr. R. P. Askew, B.A., who was the officer in charge of the Ministry's Stand at the Exhibition.

## Introductory.

The Northern Ireland Agricultural Exhibit at the Empire Exhibition, Glasgow, was situated in the pavilion devoted to Agriculture, Fisheries, and Forestry. It formed part of a United Kingdom Agricultural Marketing display and, while each stand was an independent unit, they were linked together by a common fascia emphasising the essential unity of United Kingdom interests.

## The Northern Ireland Stand.

The main features of the Northern Ireland Stand were two mechanical models, the one showing the marketing of eggs from the producer to the consumer, the other seeking to emphasise the salient facts about the bacon industry. Beneath the models short notes were appended directing the attention of the visitors to the measures adopted to secure that only produce of the highest quality is shipped to Great Britain. From the beginning these models attracted more attention than any other feature of the pavilion, their mechanical ingenuity and artistic colouring being the subject of widespread comment.

In addition to the models, the exhibit comprised a cabinet, in which sets of photographs, illustrating various phases of the dairying, fruit, and potato industries, were displayed. The photographs were changed at fairly frequent intervals, and the introduction of the cabinet was an undoubted success. Not only did it relieve, at busy times, pressure on the gangway in front of the models, but it proved a most effective means of presenting the salient facts of an industry vividly and within a small compass.

But mechanical equipment, however good, is no substitute for the produce itself. The models and the cabinet arrested attention, but once his interest was aroused the visitor stayed to examine the goods displayed on the stand. At Glasgow the amount of space devoted to the display of produce was small, but nevertheless effective. An attempt might have been made to impress visitors by a mass display of bacon, eggs, etc., and by repetition endeavour to leave an indelible impression on their minds. But however suitable such a display would be at a trade show, it would have been out of place at Glasgow. Apart from the difficulty of changing large quantities of perishable produce throughout the summer months, a "mass" display would have been out of keeping with the general appeal of the pavilion. The Northern Ireland

exhibit was designed primarily to appeal to the consumer and, for this purpose, a single article tastefully presented is as effective as indefinite repetition, and the amount of produce displayed at Glasgow was quite adequate for the purpose in view. The stand must have left the consumer with the impression that Northern Ireland was concentrating on quality first and foremost, with quantity a secondary consideration.

The produce displayed on the stand included Wiltshire sides, Irish rolls, Belfast hams, lard, eggs, butter, and cream, poultry and tinned produce, apples and mushrooms. The supply of bacon and hams was arranged by the Ulster Curers' Association, and the supply of eggs by the Northern Ireland Egg Merchants' Association. Fresh poultry and tinned produce were provided by Messrs. Gracey Brothers, Belfast, while the mushrooms and spawn were sent by Mr. F. W. Young, Coleraine. A complete list of those who supplied produce is given in an appendix.

The stand was completed by a large illuminated map of Ulster worked on ground glass, the main purpose of which was to emphasise the excellent shipping facilities available between Ulster and the chief ports of Great Britain.

Finally, an attractive frieze, the work of two Belfast artists (Messrs. Morrow and Geelan) surmounted the stand and, adequately floodlit, gave a touch of dignity and distinction to the whole exhibit.

The contractors for the stand were Messrs. T. Robinson, Limited, Liverpool, who were also responsible for the design of the models and maintained them in a satisfactory condition throughout the Exhibition.

ATTENDANCE, ETC.

The Exhibition was opened on Tuesday, May 3, and closed at midnight on Saturday, October 29, a period of 26 weeks. The number of visitors, according to official figures, reached a total of 12,593,000, giving an average daily attendance of approximately 80,000. This was below the somewhat optimistic hopes of the organisers, and it is difficult to avoid the conclusion that the West coast of Scotland is not a suitable place to hold an Empire Exhibition if good weather is an essential factor in its success. Towards the end of August efforts were made to increase the popularity of the Exhibition by extending the hours of opening and by introducing special attractions, but these measures attracted only local support, and from the point of view of Northern Ireland interests were not of any great assistance.

It was not to be expected that the agricultural pavilion would prove to be one of the most popular, but the amount of support received was an agreeable surprise and compared favourably, for instance, with the Shipping and Travel Pavilion, where the official estimate placed the number of visitors at 16,000

a day. At busy times, and particularly in the evenings, the capacity of the pavilion was taxed to the utmost and, except for a few days at the beginning of October, it was never really slack. Few visitors failed to stop and admire the Northern Ireland exhibit, and sometimes there was considerable difficulty in securing easy access for all those who wished to view the models. Indeed, so great was the number of people passing in front of the models that the floor linoleum was completely worn out by the end of the Exhibition.

The signatures in the Visitors' Book bear witness to the number of distinguished visitors who lent their patronage to the Northern Ireland exhibit. Mention may be made of visits to the stand by H.R.H. The Princess Royal, T.R.H. the Duke and Duchess of Gloucester, the Duke and Duchess of Abercorn, Viscount and Viscountess Craigavon, the Rt. Hon. W. S. Morrison, M.P., Minister for Agriculture and Fisheries, and Sir John Gilmour. In addition visits were made by almost every member of the Northern Ireland Cabinet, while several organised parties came from Ulster. Indeed, Northern Ireland visitors were always prominent and, if at times they were inclined to be critical of the size of the exhibit, their criticism can be ascribed to a praiseworthy interest in the reputation of the province. The overwhelming majority of visitors, whether from Ulster or elsewhere, expressed themselves as highly pleased with the exhibit, and on all hands it was admitted that the display was not surpassed by anything in the pavilion.

From the Northern Ireland standpoint, visitors fell into three main groups, firstly the general public, secondly the specialists in agriculture, and thirdly the "trade" group.

(1) It will be readily appreciated that the majority of visitors had no particular interest in agriculture except as consumers, and from the beginning it was abundantly clear that the policy that planned the Northern Ireland exhibit to appeal to as wide a circle of consumers as possible was fully justified. To this group of visitors the mechanical models were a never-failing source of attraction. The notes below the models, emphasising the extreme care taken to guarantee the shipment to Great Britain of produce of the highest quality, were invariably read, and the confidence engendered was reflected in the persistence with which visitors sought to buy samples of bacon, eggs, butter, and cream.

(2) The agricultural pavilion necessarily became the centre of interest for farmers and for other specialists in various branches of agriculture. Farmers did not hesitate to pay tribute to the progress made in the reorganisation of marketing of Northern Ireland produce. There was keen questioning about the working of the pig and bacon schemes, and still more about the regulations providing for the purchase of eggs on a quality basis.

(3) The third group of visitors was that representative of the various "trade" interests. Unlike a specialist show, such as the Grocers' Exhibition, Glasgow was not dominated by the trade interests—in fact they formed a very small proportion of the total. A large number of the members of the Scottish Provision Trade Association, and also of the Scottish Egg Trade Association, visited the exhibit and, while a few expressed their disappointment with its size, all spoke favourably of the display as a whole.

Apart from Scotland, trade support was somewhat disappointing. A number of visitors came from the North of England, but the South was not well represented. The majority of callers were on holiday, but introduced themselves as dealers in Northern Ireland produce.

PUBLICITY.

A Press notice, descriptive of the Northern Ireland agricultural exhibit, was prepared before the opening of the Exhibition and was distributed to Press reporters when they called, while the staff at the stand were always ready to amplify any points on request.

Another means of making known the merits of Ulster's agricultural produce was the distribution of 30,000 copies of a brochure entitled, "Agricultural Produce from Northern Ireland." The brochure presented in a very readable form the essential facts about our trade with Great Britain, and was illustrated by several excellent photographs. Copies were distributed to all those who appeared to be sufficiently interested. In addition, copies were given to wholesale merchants specially interested in our produce for distribution to their customers in the retail trade. The brochure was widely admired, and many visitors complimented the Ministry upon the excellence of this production.

As a final contribution to publicity at the Exhibition a short broadcast (of about two minutes' duration) about Ulster's agricultural exhibit was given from all Regional programmes at 10 p.m. on October 28. The talk was part of a composite broadcast on trade at the Empire Exhibition, and the opportunity was taken to detail the various commodities which Ulster supplies to the markets of Great Britain.

PRODUCE DISPLAYED AT THE EXHIBITION.

A wide variety of produce was displayed on the stand, and a short summary of the position in regard to the main items is given below.

BELFAST HAMS.

These naturally took pride of place in Glasgow, and judging by the interest taken in them, this market seems secure for generations to come. There was, however, a widespread fear among the provision trade that Northern Ireland might sacrifice its ham trade in its efforts to stimulate the production of Wiltshire bacon for the English market. A view frequently expressed was that

the ideal Wiltshire pig is too small for the ham trade in Glasgow. As is well known, the ham for this trade is boned, rolled, and sliced before sale, and the majority of the provision trade looked upon the heavy ham of 14-18 lbs. as the most desirable size, because, compared with lighter hams, wastage was small and labour was saved in preparing it for sale. Against this, however, a few took the view that even in Glasgow the large ham was becoming less desirable, partly because it was too fat and also because it was too heavy for female assistants to handle with ease. Generally speaking, the hams sent for display at the Exhibition were of a high quality, but it was obvious that certain firms produced goods which were more attractive than others.

It is perhaps unnecessary to add that the staff at the Exhibition did not fail to present the true facts regarding the development of the Wiltshire trade, and that every effort was made to re-assure customers about the future of the ham trade.

ROLLED BACON.

In Scotland the only rolled bacon that is sold is the Ayrshire roll, which is always cured there and sold after the skin has been removed. It represents a very small proportion of the bacon trade north of the Border, but there was nothing to suggest that a trade in Irish rolls could be developed in its place. Interest was confined to visitors from the North of England, and it was again emphasised that the demand is for the light weight rolls. There was some comment on the fact that all the rolls exhibited were smoked, but it was explained that this was dictated by the fact that smoked rolls retain their "bloom" much longer than unsmoked in the dust-laden atmosphere inseparable from Exhibitions.

WILTSHIRE SIDES.

There is only a comparatively small trade in Wiltshire bacon in Glasgow, and the support received from Scotland largely came from the East coast, and in particular from Edinburgh.

There was, however, evident interest in the development of the Wiltshire trade among visitors from England. The establishment of the new factories was a common topic of conversation with some members of the London provision trade, and it seemed plain that they had their eye on Northern Ireland as a potential source of supplies. There was an almost universal concern about the working of the quota restrictions on bacon imported into Great Britain, and the trade as a whole seemed anxious to be assured of an unimpeded and regular source of supply.

The type of sides sent for display on the stand was generally excellent. There was practically no complaint about the sides being too fat, and this may be taken as an indication that the efforts to produce suitable pigs for the Wiltshire trade are meeting with success.

LARD.

This was supplied by the curers who sent hams for display, but except for two or three notable exceptions the cartons did not compare favourably with the striking cartons provided, for instance, by American and Canadian firms. In several cases the covering appeared to be of ordinary grease-proof paper, and the printing was often crude. White paper shows every mark and collects dirt easily, and the only satisfactory package would seem to be a coloured cardboard carton which will always present a clean appearance.

EGGS.

There were few, if any, of the wholesale merchants in Glasgow who did not at some time view the excellent display of Northern Ireland eggs. Almost everyone paid tribute to the improvement that had taken place in the marketing of Ulster eggs, and many old-established members of the trade recalled the consignments of eggs that were sent before legislation was introduced, and provided lurid descriptions of them. Some contrasted the consistently high quality of eggs from Northern Ireland with the wide variation in the eggs delivered by Scottish producers.

The Keyes trays were the subject of frequent comment from retailers who saw in them a simple method of displaying eggs in shop windows, while the opinion of the wholesale trade was, in the main, favourable.

Among consumers in Glasgow Irish eggs were regarded with some suspicion; in their view Irish eggs were distinguished by their cheapness and were to be used first of all for cooking and, with reserve, for other purpŏses. To the very end of the Exhibition the staff were explaining the real facts about Ulster eggs, and it is to be hoped that this hard work will not be in vain.

In all quarters there was keen interest in the purchase of eggs on a quality basis, while the method of fixing prices to the producer was the subject of a large number of questions from merchants.

BUTTER.

Butter served an ornamental purpose at Glasgow in view of the fact that there is little or no surplus for shipment to Great Britain. The housewife, however, was always extremely anxious to purchase samples, and this must have been largely due to the attractiveness of the "Premium Grade" butter carton—a striking testimony to the importance of good packing in business.

APPLES.

Cold-stored apples (Bramley's Seedling) were shown throughout the month of May, but they suffered in comparison with the gas-stored fruit shown on the adjoining stand of the English Ministry. Apples were again exhibited from the beginning of September, and they were equal to anything shown in the pavilion.

Fruit merchants were mainly interested in the size of the 1938 crop of apples, but the representatives of one or two London firms had heard good reports of the behaviour of Irish apples under cold and gas storage, and were interested in them from that point of view. Several visitors seemed quite unaware that Northern Ireland shipped apples to Great Britain in commercial quantities.

Potatoes.

This industry was represented at Glasgow only by one set of photographs displayed from time to time in the turnover cabinet.

Mushrooms and Mushroom Spawn.

These were shown throughout the Exhibition and proved a highly successful introduction. Not only did they help to remove an atmosphere of "heaviness" from the stand, but also they left the visitor with the impression that Northern Ireland could produce luxuries for the most fastidious tastes. The quality of the mushrooms left nothing to be desired, and there was an exceptionally large number of enquiries for the spawn.

Tinned Produce.

This consisted of chicken in tin and in glass, tinned apples, cottage dinners, and other novelties. The products exercised a strong appeal to the general public, and the staff were constantly answering questions and directing housewives to shops where the goods could be purchased.

A large number of trade inquiries were forwarded to the appropriate quarter, and judging by this Exhibition the market for canned goods has by no means reached saturation point. Indeed, increased production seems necessary, for there were difficulties regarding the delivery of certain items shown on the stand.

Trade Inquiries and General Observations.

In considering the benefits accruing from the Exhibition it should be emphasised at the outset that the Empire Exhibition was primarily of a prestige and publicity character, and not really a trade show at all. This was reflected in the type of visitors, the majority being sightseers and not representatives of the trading interests. It would be unreasonable, therefore, to expect that customers would be proportionately so numerous as at an exhibition with a specialised appeal.

In spite of these limiting factors, however, a large number of trade inquiries were received ranging from mushroom spawn for Medicine Hat, potatoes for Paris, and pigs' offal for the Gold Coast. The majority of inquiries were dealt with on the spot, as all the information was at hand to assist the prospective buyer. Enquiries for the goods of a specific firm were forwarded to the firm concerned, while anything of an important nature was referred to Stormont.

Interest in the bacon and hams did not, perhaps, fulfil the highest expectations, but it must be borne in mind that our trade in Glasgow is so firmly established that, although it would be presumptuous to suggest that it is incapable of expansion, yet, boosting our produce there gave the impression of preaching to the converted.

Eggs attracted several important customers, but the tinned produce gave every promise of securing the greatest number of direct orders.

The majority of prospective orders were from Scotland, and there seems no doubt that the Exhibition did not secure the amount of outside support which the organisers expected. The Empire side of the Exhibition tended to become neglected, and the patronage received from England was relatively small.

It was in the contacts established with the consumers that the Northern Ireland exhibit was highly successful. Ulster produce, though well-known to the wholesaler and to a lesser extent to the retailer, often loses its identity when handed on to the consumer, but the latter is the final judge and the one whose good-will must be enlisted.

It is the effort to get into direct touch with the consumer that has led big business interests to spend large sums in Press advertising. Equivalent results can be secured by close study of the trends of consumption and by producing suitable goods of the highest quality.

It is an exhibit such as that staged at Glasgow which enables Ulster to place its products before a large body of consumers. Not only was there on view a wide stage of foodstuffs, tempting in themselves, but the visitor must have been impressed by the fact that in almost every instance the produce was backed by Government guarantees. The confidence and goodwill of the consumer is a vital pre-requisite of trade expansion in Great Britain, and the Glasgow Exhibition has justified itself on that ground alone.

In discussing problems with consumers there was an evident difficulty in assisting them to identify Ulster produce. The average consumer is utterly dependent upon the good faith of his retailer in the purchase of eggs, bacon, and fruit, to mention only three items. Given the fact that the consumer has a deep-rooted objection to a stamped egg, for instance, it follows that much must be left to the honesty of the retailer, and he is seen to be a vital link in the distributive side of our trade.

It is this fact that has been chiefly responsible for the unprecedented expansion in the sale of branded and proprietary goods in recent years. The manufacturer advertises his products in order to get into direct touch with the consumer, and then sells it in an attractive branded package so that the consumer can easily identify it.

The lesson to be drawn would appear to be that distinctive marking should be adopted whenever possible and where, as in the case of eggs, marking is impracticable more attention might be devoted to the question of placing goods in attractive cartons that are easy to identify. The higher the quality of the produce the more necessary it becomes that Northern Ireland should secure the credit and goodwill attached to it. But attractive packaging has a sales value independent of its importance as a means of identification. It was an object lesson to contrast the interest shown in the Ulster Premium butter carton with the neglect of the lard packets. Both were dummies, but everyone wanted to buy samples of the butter, while no one asked for the lard.

The question of selling samples at exhibitions is one that frequently arises, and experience at Glasgow may be of some interest for the future. There can be little doubt that the decision not to sell samples at the Northern Ireland stand was the correct one. There were, however, continuous and persistent demands for samples from the general public, and while the value of some of this patronage may be open to legitimate doubt, there is no question but that many were genuinely desirous of giving Northern Ireland produce a trial. The objections to such a course, however, were conclusive.

It would have been out of keeping with the character of the pavilion and, the selling of samples over a period of six months would have caused friction with the trading interests in Glasgow. When an exhibition lasts only for a short period, the problem of competition with private interests does not arise in an acute form, and there is much to be said for the policy of sampling.

Summary of Results.

As no sales of Northern Ireland produce were made the success of participation in the Exhibition cannot be subject to exact quantitative measurement, but both the direct and indirect benefits promise to be considerable. The following would appear to be the more important results:—

(1) The contact established with perhaps half a million consumers was all important. They examined and admired Ulster's produce, and were clearly impressed by the guarantees given by the Government, and their confidence in the quality of our produce should be of inestimable value in the future.

(2) New trade connections were established over a wide range of produce, and these should be of immediate benefit.

(3) Merchants handling our goods in all parts of Great Britain introduced themselves and went away with renewed confidence in our goods.

(4) Every visitor took away the impression of a vigorous and progressive agriculture, and the statistics of our trade with Great Britain conveyed to many important visitors the importance of Ulster as a source of food.

(5) Contact with the officers of the Ministry resolved the doubts of both trade and consumer interests on many questions about which they had been apprehensive, and restored goodwill.

(6) Our produce received widespread publicity, which was much greater than could have been secured by equivalent expenditure in other directions.

## APPENDIX.

List of the persons and firms who supplied Produce for display on the Ministry's Stand at the Empire Exhibition, Glasgow.

### I. Wiltshire Sides.

Messrs. Biggers, Ltd., Foyle Street, Londonderry.
Messrs. H. Denny & Sons, Ltd., Obins Street, Portadown, County Armagh.
Messrs. J. & T. Sinclair & Co., Ltd., 7, Tomb Street, Belfast.
Mr. R. A. McElderry, Markets, Ballymoney, County Antrim.

### II. Roll Bacon, Hams, etc.

Messrs. J. & T. Sinclair & Co., Ltd., 7, Tomb Street, Belfast.
Messrs. Biggers, Ltd., Foyle Street, Londonderry.
Messrs. D. McCartney & Son, Ballymoney Street, Ballymena.
Messrs. Buchanan Bros., Foyle Street, Londonderry.
Messrs. Mark, Roulston & McLaughlin, Foyle Street, Londonderry.
Messrs. W. Pinkerton & Son, 23, Scotch Street, Armagh.
Scottish Co-operative Wholesale Society, Enniskillen, County Fermanagh.
Messrs. W. McConnell & Co., Hill Street, Ballymena, County Antrim.
Mr. R. G. Nelson, Ballylummin, Ahoghill, Ballymena, County Antrim.
Irish Bacon Curing Co., Ltd., 40, Townsend Street, Belfast.
Messrs. Stevenson & Co. Ltd., Townhead Street, Ballymoney, County Antrim
Messrs. Thos. Forde & Co., Ltd., Talbot Street, Belfast.
Belfast Curing Co., Swift Street, Belfast.
Mr. R. A. McElderry, Ballymoney, County Antrim.

### III. Eggs.

Messrs. Thos. Carson, Ltd., Produce Merchants, John Street, Dungannon, County Tyrone.

Mrs. R. Clarke, Keady, County Armagh.

Mr. Robert Doyle, Markethill, County Armagh.

Messrs. Semple Brothers, Dungiven, County Londonderry.

Messrs. Gracey Brothers, Gt. George's Street, Belfast.

Messrs. J. Harvey & Co., Ltd., Banbridge, County Down.

Messrs. Stevenson & Co., Ltd., Ballymoney, County Antrim.

Messrs. A. & W. Davidson, Ballynahinch, County Down.

Mr. A. Hughes, Line Side, Coalisland, County Tyrone.

Mr. R. A. McElderry, Ballymoney, County Antrim.

Mr. R. Bradford, Dobbin Street, Armagh.

Mr. George Chesney, Portglenone, County Antrim.

Mr. R. G. Nelson, Ahoghill, County Antrim.

Mr. Robert Cowden, Annalong, County Down.

Scottish Co-operative Wholesale Society, Limited, Enniskillen, County Fermanagh.

### IV. Dressed Poultry.

Messrs. Gracey Brothers, Great George's Street, Belfast.

### V. Tinned Goods.

Messrs. Gracey Brothers (Poultry Dept.), Hillhall, Lisburn.

### VI. Mushrooms and Spawn.

Mr. F. W. Young, Mountsandel Nurseries, Coleraine.

# MARKETING SCHEMES.

## AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.) 1934.

### PIG PRICES FOR DECEMBER, 1938.

The following announcement has been made by the Pig Industry Council for Northern Ireland.

#### Prices for Dead Pigs.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in December, 1938, are as follows :—

| Weight Class. (Dead Weight) | Grade 1. | Grade 2. | Grade 3. | U.L. or U.F. | Partly Black Pigs. |
|---|---|---|---|---|---|
| c.1.0.21 to c.1.1.13 | 65/2 | 62/2 | 59/2 | 55/2 | |
| c.1.1.14 to c.1.2.3 | 69/2 | 66/2 | 63/2 | 59/2 | 5/- |
| Weight Class. (dead Weight) | Grade A | Grade B | Grade C | U.L. or U.F. | below relevant Grade Price. |
| c.1.2.4 to c.1.2.14 | 69/2 | 66/2 | 63/2 | 60/2 | |
| c.1.2.15 to c.1.3.14 | 69/2 | 66/2 | 63/2 | 60/2 | |
| c.1.3.15 to c.2.0.0 | 66/2 | 63/2 | 60/2 | 57/2 | |
| c.2.0.1 to c.2.0.14 | 60/2 | 57/2 | 54/2 | 51/2 | |

Pig Carcases c.1.0.0 to c.1.0.20—62/2

(*N.B. These prices show a decrease of* 1/2 *on those fixed for October,* 1938).

Authorised cuts :—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase is wholly condemned on account of disease

the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs, smelling pig carcases with definite indications of putrefaction, and pig carcases badly abused or damaged before being handed over by the producer to the curer.

PRICES FOR WILTSHIRE PIGS SOLD ON DIRECT CONTRACT.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of December, 1938, are as follows:—

| Weight Class (Dead Weight) | Grade 1. | Grade 2. | Grade 3. | U.L. or U.F. | Unsuitable. |
|---|---|---|---|---|---|
| c.1.0.21 to c.1.1.13 | 75/2 | 72/2 | 69/2 | 65/2 | 62/2 |
| c.1.1.14 to c.1.2.3 | 75/2 | 72/2 | 69/2 | 65/2 | 62/2 |
| | Grade A. | Grade B. | Grade C. | U.L. or U.F. | |
| c.1.2.4 to c.1.2.7 | 72/2 | 69/2 | 66/2 | 63/2 | |
| c.1.0.0 to c.1.0.20 | Suitable 64/2 | | Unsuitable 62/2 | | |
| Over c.1.2.7 | On the same basis as pigs sold dead. | | | | |

*N.B. These prices show a decrease of* 1/2 *on those fixed for October,* 1938)

PRICES FOR LIVE PIGS SOLD TO THE PIGS MARKETING BOARD (NORTHERN IRELAND).

In the case of pigs sold alive to the Pigs Marketing Board during December, 1938, the prices, according to grade, are as follows:—

| Live Weight. | Grade 1. | Grade 2. | Grade 3. | | Unsuitable. |
|---|---|---|---|---|---|
| c.1.1.14 to c.1.2.13 | 48/– | 48/– | 48/– | | 46/6 |
| c.1.2.14 to c.2.0.0 | 56/3 | 54/– | 51/9 | U.L. or U.F. 48/9 | 46/6 |
| c.2.0.1 to c.2.1.14 | 50/3 | 48/– | 45/8 | | 43/6 |
| c.2.1.15 to c.2.2.7 | 48/– | 45/9 | 43/6 | | 41/3 |
| c.2.2.8 to c.2.2.21 | 43/6 | 41/3 | 39/– | | 36/9 |

*N.B. These prices show a decrease of* 1/- *on those fixed for October,* 1938).

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0 to c.2.2.21 can be sold only to the Board.

### Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy and contribution at present amounting to 4/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

## COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 19th November, was 9/1¼d. The average price for the similar period ended 22nd October was 9/4¼d. These figures have been calculated by the Ministry from returns collected from ten representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based:—

| | | | | |
|---|---|---|---|---|
| Maize Meal | ... | ... | ... | 30% |
| Barley Meal | ... | ... | ... | 30% |
| White Pollards | ... | ... | ... | 20% |
| White Bran | ... | ... | ... | 10% |
| Meat Meal (60% Protein) | ... | ... | | 10% |

## GRADING STATISTICS.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated during September, 1938.

| Under c.1.0.21 | | c.1.0.21 to c.1.1.13 | | | | | c.1.1.14 to c1.2.3. | | | | | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Suitable | Unsuitable | Grade 1 | Grade 2 | Grade 3 | U.L. & U.F. | U. | Grade 1 | Grade 2 | Grade 3 | U.L. & U.F. | U. | |
| 1.11 | .12 | 2.44 | 1.15 | .38 | .14 | .02 | 5.10 | 5.34 | 2.39 | .94 | .03 | 19.16 |

| Grade A. | | | | Grade B. | | | | Grade C. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | |
| 9.24 | 20.83 | 3.04 | .41 | 6.61 | 20.71 | 3.88 | .85 | 2.28 | 8.11 | 1.27 | .29 | 77.52 |

| Ungraded Carcases. | | | | | | |
|---|---|---|---|---|---|---|
| Under Grade A measurements. U.L. | Over Grade C measurements U.F. | Wholly condemned U1. | Wholly black, injured or damaged U2. | Overweights, boars, sows, etc. X. | Partly Black Y. | |
| .02 | 2.35 | .04 | .42 | .47 | .02 | 3.32 |
| | | | | | Total | 100% |

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The following table gives the percentage results of an analysis of the purchase and grading statements furnished by Wiltshire Bacon Curers in respect of live pigs delivered on direct contract by producers during the month of October, 1938.

| Weight Class. | Grade 1. | Grade 2. | Grade 3. | Unsuitable U.L. or U.F. | Total |
|---|---|---|---|---|---|
| Under c.1.0.0 | | | | | — |
| c.1.0.0 to c.1.0.20 | | | | | .30 |
| c.1.0.21 to c.1.2.3 | 47.31 | 32.16 | 7.60 | 2.23 | 89.30 |
| | Grade A. | Grade B. | Grade C. | | |
| c.1.2.4 to c.1.2.7 | 2.02 | 2.26 | .71 | .09 | 5.08 |
| c.1.2.8 to c.1.3.14 | 1.60 | 2.41 | 1.22 | .09 | 5.32 |
| | | | | Total | 100.00 |

The average net price per cwt. in respect of these deliveries works out at £3 11s. 4½d. after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight works out at c.1.1.20½, the net average price per pig being £5 2s. 4d.

# LAND FERTILITY SCHEME.

## DETAILS IN CONNECTION WITH THE OPERATION OF THE SCHEME IN NORTHERN IRELAND.

As most farmers are now aware, the object of the Scheme is to increase the fertility of the soil by the application of lime and of basic slag. Under the terms of the Scheme grants amounting to one-half the cost of lime and one-quarter the cost of British-made basic slag (including these respective proportions of the cost of transport) are given to farmers who purchase these materials for application to land in their occupation. The Scheme came into operation on the 6th September, 1937, and during the first working year, that is in the year ended 31st August, 1938, the number of applications received was 14,143, submitted by over 10,000 farmers. The total quantity of lime distributed was 65,000 tons, and of slag 1,600 tons. Included in these figures are about 870 tons of lime which sixteen farmers produced for application to their own land. The State contribution paid to farmers in Northern Ireland during this first year of the Scheme amounted to over £50,000.

An examination of the Ministry's records discloses that reasonable advantage has been taken of the Scheme by farmers in Counties Antrim, Down, Londonderry and Tyrone, but even in these Counties an extended use might have been made of the facilities available. In Counties Armagh and Fermanagh, however, the Scheme has not been availed of to anything approaching the desired extent. Speaking generally there is leeway to be made up in all Counties, and it is hoped that this will be done as soon as possible because lime, in particular, is a necessity for most of the land in Northern Ireland, and may not always be available to farmers at half-price, as it is now under the terms of the Scheme.

Farmers who contemplate purchasing lime or slag under the terms of the Scheme should bear in mind the following main conditions to be complied with:—

(1) The material must be purchased from an approved supplier. Lists of the names and addresses of approved suppliers of lime and of basic slag are available for inspection at all Police Barracks and Creameries in Northern Ireland.

(2) The State contribution is payable only in respect of consignments of two tons or over either of lime or of basic slag. A consignment of one ton of lime and one ton of slag would not be eligible for the contribution.

(3) The contribution is payable only in respect of lime and basic slag produced in the United Kingdom.

(4) Contribution may be claimed only in respect of lime or basic slag which is being applied to agricultural land owned by a *bona fide* occupier of such land. The term "agricultural land" means any land used as arable, meadow or pasture ground, or for the purpose of poultry farming, market gardens, nursery grounds, orchards, or allotments.

It may be of interest to some farmers to learn that the contribution is also payable in respect of lime produced by themselves and applied to their own land. Special conditions must, however, be observed in such cases before production is begun, and farmers who have facilities for producing lime for application to the land on their own farms are, therefore, advised to communicate with the Ministry if they desire to claim the contribution under the Scheme.

## THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

The following is a summary made under these Acts up to and including 3rd December, 1938.

| *Live Weight* | *Number of Animals* | *Total amount paid* £ s. d. |
|---|---|---|
| England and Wales .. | 4,663,870 | 11,394,365 7 4 |
| Scotland .. .. | 1,421,699 | 3,695,815 11 3 |
| Northern Ireland .. | 484,513 | 1,025,363 0 1 |
| Total (United Kingdom) .. | 6,570,082 | 16,115,543 18 8 |
| *Dead Weight* | | |
| England and Wales .. | 143,553 | 359,809 1 1 |
| Scotland .. .. | 44,408 | 128,471 12 5 |
| Total (Great Britain) .. | 187,961 | 488,280 13 6 |

## NUMBERS OF FAT CATTLE CERTIFIED FOR SUBSIDY.

| | | Home-bred | | Imported | | Total |
|---|---|---|---|---|---|---|
| | | Ordinary Grade | Quality Grade | Ordinary Grade | Quality Grade | |
| England | August, 1938 .. | 25,458 | 36,525 | 7,288 | 19,939 | 89,210 |
| | September, 1938 | 23,282 | 32,999 | 6,640 | 19,531 | 82,452 |
| | October, 1938 .. | 27,965 | 36,538 | 7,943 | 21,148 | 93,594 |
| | Total, 1938 | 76,705 (28.92%) | 106,062 (39.98%) | 21,871 (8.25%) | 60,618 (22.85%) | 265,256 |
| | Aug.-Sept.-Oct., 1937 | 134,909 (50.01%) | 54,433 (20.18%) | 44,377 (16.45%) | 36,050 (13.36%) | 269,769 |
| Wales | August, 1938 .. | 2,731 | 2,655 | 52 | 221 | 5,659 |
| | September, 1938 .. | 3,364 | 3,253 | 90 | 474 | 7,181 |
| | October, 1938 .. | 5,513 | 4,393 | 141 | 531 | 10,578 |
| | Total, 1938 .. | 11,608 (49.57%) | 10,301 (43.99%) | 283 (1.21%) | 1,226 (5.24%) | 23,418 |
| | Aug.-Sept.-Oct., 1937 | 17,387 (82.67%) | 2,417 (11.49%) | 1,012 (4.81%) | 215 (1.02%) | 21,031 |
| Scotland | August, 1938 .. | 2,735 | 14,049 | 1,567 | 10,628 | 28,979 |
| | September, 1938 | 2,995 | 12,801 | 1,317 | 8,730 | 25,843 |
| | October, 1938 .. | 3,333 | 13,434 | 1,283 | 9,041 | 27,091 |
| | Total, 1938 .. | 9,063 (11.06%) | 40,284 (49.18%) | 4,167 (5.09%) | 28,399 (34.67%) | 81,913 |
| | Aug.-Sept.-Oct., 1937 | 15,104 (19.86%) | 36,035 (47.38%) | 4,847 (6.37%) | 20,064 (26.38%) | 76,050 |
| N. Ireland | August, 1938 .. | 5,719 | 1,411 | 641 | 335 | 8,106 |
| | September, 1938 .. | 5,521 | 1,373 | 908 | 507 | 8,309 |
| | October, 1938 .. | 6,247 | 1,348 | 1,148 | 577 | 9,320 |
| | Total, 1938 .. | 17,487 (67.95%) | 4,132 (16.06%) | 2,697 (10.48%) | 1,419 (5.51%) | 25,735 |
| | Aug.-Sept.-Oct., 1937 | 19,060 (82.22%) | 822 (3.55%) | 3,040 (13.11%) | 259 (1.12%) | 23,181 |
| United Kingdom | August, 1938 .. | 36,643 | 54,640 | 9,548 | 31,123 | 131,954 |
| | September, 1938 .. | 35,162 | 50,426 | 8,955 | 29,242 | 123,785 |
| | October, 1938 .. | 43,058 | 55,713 | 10,515 | 31,297 | 140,583 |
| | Total, 1938 .. | 114,863 (28.98%) | 160,779 (40.57%) | 29,018 (7.32%) | 91,662 (23.13%) | 396,322 |
| | Aug.-Sept.-Oct., 1937 | 186,460 (47.81%) | 93,707 (24.03%) | 53,276 (13.66%) | 56,588 (14.51%) | 390,031 |

The above table of figures, as built up from information supplied by the Livestock Commission from time to time, compares the number of cattle certified for the two subsidy grades in the three months August, September and October of this year and last year. It is the first quarterly period for which

grading figures are comparable since the change in the Grading Regulations in July, 1937, and is of particular interest on this account since it shows clearly the trend of developments in this respect.

A study of the figures shows immediately that there has been a considerable improvement in the United Kingdom in the production of quality beef, which was the object of the change in the Regulations. The total certifications for the United Kingdom increased by over 6,000 head, but the more important fact is that the percentage that attained the quality grade increased appreciably. Of the total of 396,322 animals certified in the three months of 1938, 63.70 per cent. gained the quality grade, as against 38.54 per cent. in 1937. Each one of the countries represented in the total shared this improvement to a varying extent.

The figures in respect of Northern Ireland are, however, outstanding in this respect. In this area the number of quality certifications increased almost five-fold—from 822 to 4,132, or from 3.55 per cent. to 16.06 per cent. This increase is indeed gratifying, and illustrates very clearly the fact that Northern Ireland producers have, within the period indicated, shown their realisation of the demands for the quality standard to a marked degree. There is, therefore, every prospect that with increasing knowledge being gained, the proportion of animals of the quality standard will increase with the resulting improvement in the finishing of fat cattle.

In the table below the average prices per live cwt. of certified cattle are compared for the same months. They show the appreciable fall in prices this year as compared with 1937, but it may be added that the reduction has, to some slight extent, been offset by the increased proportion of quality animals which qualified for the higher rate of subsidy. Furthermore, another very satisfactory achievement disclosed by the returns is that the prices obtained for Northern Ireland cattle show a closer approximation to those obtained for English cattle than before the beef subsidy was introduced, and thus afford further proof of the advance made in the production of fat cattle of better quality in this country within recent years.

## AVERAGE PRICES PER LIVE CWT. OF CERTIFIED CATTLE.

| | | Ordinary Grade | Quality Grade | Average |
|---|---|---|---|---|
| | | s. d. | s. d. | s. d. |
| England | August, 1938 .. .. | 37 11 | 40 10 | 39 10 |
| | September, 1938 .. .. | 35 11 | 38 11 | 37 11 |
| | October, 1938 .. .. | 34 9 | 37 9 | 36 8 |
| | Aug.-Sept.-Oct., 1937 .. | 38 8 | 41 5 | 39 10 |
| Wales | August, 1938 .. .. | 37 11 | 40 3 | 39 2 |
| | September, 1938 .. .. | 35 4 | 37 4 | 36 5 |
| | October, 1938 .. .. | 33 7 | 35 6 | 34 7 |
| | Aug.-Sept.-Oct., 1937 .. | 37 8 | 40 7 | 38 4 |
| Scotland | August, 1938 .. .. | 38 6 | 42 7 | 42 1 |
| | September, 1938 .. .. | 36 4 | 40 5 | 39 9 |
| | October, 1938 .. .. | 35 1 | 39 6 | 38 9 |
| | Aug.-Sept.-Oct., 1937 .. | 40 4 | 45 8 | 44 7 |
| N. Ireland | August, 1938 .. .. | 35 9 | 36 10 | 36 0 |
| | September, 1938 .. .. | 33 4 | 34 6 | 33 7 |
| | October, 1938 .. .. | 32 0 | 33 3 | 32 4 |
| | Aug.-Sept.-Oct., 1937 .. | 37 6 | 39 10 | 37 10 |
| United Kingdom | August, 1938 .. .. | 37 8 | 41 4 | 40 1 |
| | September, 1938 .. .. | 35 7 | 39 2 | 37 11 |
| | October, 1938 .. .. | 34 3 | 38 0 | 36 8 |
| | Aug.-Sept.-Oct., 1937 .. | 38 7 | 43 0 | 40 7 |

# AGRICULTURAL NOTES.

## SEASONAL FARM NOTES.

Ploughing.—Every opportunity of favourable soil conditions should be taken to push forward the ploughing of stubble ground. If the stubble ground is too wet for ploughing, it is advisable to commence ploughing the lea ground in order to avoid a rush of this work in spring.

Potatoes.—The advantages of having seed potatoes sprouted cannot be over emphasised. When the weather is too wet to permit outside work being done the time should be spent in selecting and boxing seed potatoes, if this has not already been done. If the existing stocks of potatoes on the farm are not pure as regards variety, or if they have become deteriorated because of the presence of virus diseases such as leaf-roll or mosaic, new supplies of seed certified to be true to variety, and free from virus diseases, should be obtained. Lists giving the names and addresses of growers of certified crops have been published and may be obtained from the Ministry free, on request.

Potato pits should now be well earthed up to prevent damage by frost, and care should be taken to ensure that water does not lie around the bottom of the pit. If there appears to be any tendency for water to lie around the pit a trench should be made to drain it off.

Application of Lime.—The best place in the ordinary rotation to apply lime is on top of the ploughed ground before the last corn crop is sown. Lime is washed down to the subsoil very quickly and it is, therefore, essential to keep it on the top of the ground as much as possible. Lime should never be ploughed down, and it would be a bad practice to apply the lime on top of the land which grew potatoes this year and then to plough the land.

Recent observations have shown that if burned lime is applied to the ground just before the grass seeds are sown there is risk of injury to the seedlings by the lime. It is, therefore, advisable to plough the potato ground in good time and have the lime spread at least three weeks before the seeds are sown.

Drainage.—When slack periods occur at this time of year labour can be usefully employed in attending to land in need of drainage. The cleaning out of ditches and the removal of obstructions from choked drain outfalls will do much to improve existing conditions. A wet patch in a well drained field will usually indicate that a drain has become stopped up, probably due to a collapse of the piping or the accumulation of silt. Such drains should be opened and repaired immediately.

Waste land which does not lie too flat can be converted into fairly good grazing by draining the ground and then applying phosphatic manures and, later, lime. Lime should not be applied to water-logged ground, as it will

have very little beneficial effect on it, and there will consequently be considerable wastage. Farmers contemplating the drainage of land are reminded that the Ministry has a scheme in operation under which financial assistance is given for the carrying out of approved drainage and other land improvement works. Particulars of this scheme were given in last month's report, and may also be obtained from the Ministry on application.

Forestry.—The planting of trees, either for the provision of shelter belts or for timber production, may be carried out from now onwards when soil conditions are suitable. Full particulars regarding suitable species of trees and methods of planting are given in Leaflets Nos. 62 and 72. See also under "Announcements and Reminders".

## SEASONAL LIVESTOCK NOTES.

Wintering Cattle.—Cattle require special care and attention during winter. A maximum thrive will be obtained only if the beasts are properly fed and are provided with comfortable houses. Cattle should receive an allowance of good hay and roots and a good supply of clean water, as well as a suitable meal ration. Examples of suitable meal rations for cattle and other classes of livestock were given in last month's report. It is important that cattle should be fed regularly. Cattle houses should have a good dry roof, be free from draughts and, at the same time, be well lighted and ventilated. It is also essential that cattle are provided with a dry bed.

Care of Bulls.—It is important that bulls should receive ample exercise during the winter months in order to maintain them in breeding condition. A daily walk of at least half a mile will help to keep the bull active. While it is necessary to keep the bull in good flesh, this does not mean that he should be allowed to become over-fat. An over-fat bull is seldom a satisfactory breeder. A suitable meal ration for a bull consists of:—

1 part by weight Crushed oats.
1 „ „ „ Maize meal.
1 „ „ „ Bran
1 „ „ „ Linseed cake

This mixture may be fed at the rate of from 6 to 8 lb. per day, depending on the age of the bull, along with about 4 stones of roots and as much hay as is eaten.

Bulls should be groomed daily with a curry comb and brush. Grooming stimulates the circulation of the blood, and aids in food digestion, and in the maintenance of good health. A periodical application of a non-poisonous disinfectant to the animal's coat is also necessary as a preventive against lice. Further information on the feeding and management of bulls is given in Leaflet No. 61.

Sheep.—The breeding flock requires special attention from now onwards. The animals should be maintained in a fit condition, and if the grass is scarce a small allowance of concentrates should be given. A mixture of equal parts of crushed oats, decorticated earthnut cake and bran makes a suitable meal ration for sheep. Only a limited supply of turnips should be given, and it is also beneficial to allow the flock to have access to a supply of rock salt. Diseases such as liver fluke and footrot should be guarded against. Full particulars regarding the control of liver fluke disease are given in Leaflet No. 24, and of the prevention and treatment of footrot in Leaflet No. 63.

Rearing of Young Pigs.—If a satisfactory thrive is to be obtained it is essential that pigs should be provided with good, warm, housing accommodation. Young pigs are very liable to take chills and colds, and if exposed to draughts or required to lie on a cold floor will not make normal growth.

Concrete floors, which have been laid on the earth without a sufficient foundation of stone or other insulating material, will usually be cold and damp during winter. It is a great advantage in such cases to put a wooden platform in the pen. This platform should be raised about 2 inches from the concrete. The pigs when sleeping on the platform will be much warmer than when sleeping on the cold concrete. Where such platforms are in use, it is of the utmost importance to remove them at frequent intervals so that the space between the platform and the floor can be cleaned and disinfected thoroughly.

In the case of a piggery which has an iron roof it will be a great help in keeping the house warm if a wooden ceiling is put under the iron.

The piggery should be kept in a dry, clean condition, as damp, dirty houses are conducive to outbreaks of chills and pneumonia, and also to the spread of worms and other parasites.

Management of Young Horses.—A young horse should be kept at night in a roomy loosebox which is well ventilated. During fine days a run through a dry grazing field will be beneficial. The young horse should not be allowed to get into a fat condition but should be kept growing. A daily feed of a mixture of crushed oats and bran, along with an allowance of good hay and a turnip at night, will keep the animal in good condition. Careful attention should be given to the feet, and the hoofs should be kept rasped down so that the frog touches the ground.

Winter Feeding of Foal.—During the first winter the food which the foal gets each day may consist of:—

4 lb. Crushed Oats.
2 lb. Bran
4 to 6 lb. Hay
1 swede.

and during the second winter a suitable daily feed would be:—

6 lb. Oats
1 lb. Bran
8 to 10 lb. Hay
1 swede.

Breaking.—When the young horse is rising three years old he should be taught to work in chains. The first lessons should consist of driving on reins and teaching him to respond to the bit. When first harnessed he should be driven about in the harness for a short time before being put to any work. In order to teach the horse to pull, ropes should be attached to the collar and pressure applied gradually on the ropes while he is walking. If a slipe is available he should be harnessed to it and taught to work at the length of the reins and to turn in chains.

After this, the young horse may be put to work at ploughing with another horse. The lightest work should be given and only short periods of one or two hours each per day worked at first. The young horse should be handled gently but firmly, as it is at the breaking stage that bad habits are formed, and for that reason he should be watched and managed very carefully.

## SEASONAL GARDEN AND ORCHARD NOTES.

Planting Fruit Trees and Bushes.—This work may still be undertaken whenever the soil is in a suitable condition; that is, moderately dry. Planting should be postponed when the ground is very wet, or when it is frozen. If the plants arrive from the nursery at a time when planting cannot be undertaken, they can be safely left for a week or more in a cool shed without being unpacked. Alternatively the plants may be "heeled in", which is done by making a hole large enough to receive the roots of all the plants, putting the roots into this hole and covering them with soil, so that the roots will be kept in a moist condition.

Pruning.—The pruning of established apple trees should be pushed on whenever the weather is suitable. Tall trees and those overcrowded with branches are difficult to spray properly, and require a greater quantity of spray fluid than those of moderate height and whose branches are well thinned out. The removal of crossing branches, of dead and diseased wood, and of superfluous fruiting spurs, is an important operation in the production of large clean fruit. Some of the highest branches should be shortened back to a fork or to a large spur, and where the spurs are crowded some of these should be shortened back to a vigorous fruit bud or else cut clean out. Full particulars of the pruning of apple trees are given in Leaflet No. 34.

Spraying Fruit Trees.—Supplies of spraying materials such as tar oils, mineral oils or a combination of these washes should be obtained without delay so that the work of spraying may be undertaken whenever the weather permits. Supplies of these washes should be protected from frost during storage. The trees should be dry before spraying with these materials is commenced, and the work should not be undertaken unless there is every prospect of the spray fluid having ample time to dry on the trees before rain sets in or the temperature falls to freezing point.

The spraying with tar oil washes of plum and damson trees, of apple trees of the varieties Beauty of Bath, Gladstone and Newton Wonder, and of black currant bushes, should be completed before the middle of January. If done later than that time there is a risk of damage being caused to the buds.

Manuring Apple Trees.—If apple orchards have not already been manured as advised in last month's notes, this work should be attended to at once. Most apple orchards in Northern Ireland would benefit considerably from a dressing of from 2 to 4 cwt. of sulphate of potash per acre. From 1 to 2 tons of lime per acre will improve the condition of the soil and the growth of grass and clover under the trees, and for these reasons will also benefit many orchards. This is a suitable time to apply lime.

Supplies of Seeds.—A list of the quantity of seeds required for the coming season should be made out, and the order for them despatched to the seedsman without delay.

General.—Continue to dig or to trench, as necessary, any ground that becomes cleared of the crop that was grown on it. Ground on which it is intended to grow roots next year should be trenched as soon as possible.

## SEASONAL POULTRY-KEEPING NOTES.

Laying Flock.—Pullets which have been in lay throughout the autumn are very liable to moult at this season, if they are allowed to become low in condition, are overcrowded in the house, are infested with parasites, or are exposed to cold winds. Good feeding and shelter from cold winds will assist in preventing moulting as will roomy, well-ventilated and clean houses. It is a great advantage if the houses are big enough to enable the birds being kept indoors comfortably during wet cold days. Each bird should have at least 2 square feet of floor space in the house. Fresh, clean litter should be provided regularly in the house, and some grain scattered in it to encourage the birds to scratch and thus to obtain exercise. The bulk of the grain allowance should be given in the evening in troughs. If too much grain is given in the morning the birds may not eat sufficient mash, and egg production will decline. Full particulars with regard to the feeding of laying hens are given in Leaflet No. 3.

Insect Pests.—Infestations of insect pests, such as lice and red mite, are common causes of moulting, and of a decline in egg production, and a continual watch should be kept for the presence of these pests. Lice live on the birds continuously, but red mites hide in the crevices of the perches, perch sockets, etc., during the day and feed on the birds' blood only at night. When red mites are found to be present the house should be thoroughly cleaned out, particular attention being paid to corners, crevices, perch sockets, etc., and creosote applied to the perches and the perch supports. The inside of the house should be treated with fresh limewash, to which paraffin oil has been added in the proportion of ½ pint to each gallon of lime wash. A convenient method of destroying lice is to paint the tops of the perches with nicotine sulphate about half an hour before the birds go to roost in the evening. The heat of the birds when roosting causes the nicotine sulphate to give off fumes which destroy the lice. As these fumes will not kill the eggs of lice, a second painting with the nicotine sulphate in two weeks' time from the first will be necessary to kill the lice which hatch from these eggs. Nicotine sulphate can be obtained from any chemist.

Feeding and Management of Breeding Stock.—Good hatching results cannot be obtained unless the parent stock birds are fed and managed properly. In feeding the breeding stock the aim should be to keep the birds in a fit, healthy condition. It is bad policy to attempt to force breeding birds to produce excessive numbers of eggs. Milk should be given, if available, and the addition of about 1 quart of good quality cod liver oil to each cwt. of mash is recommended, as it aids in improving fertility and hatchability. See article on cod liver oil on page 466. The grain ration should contain some wheat and cracked maize as well as oats.

Further information on the feeding and management of poultry breeding stock is given in Leaflet No. 83.

Hatching.—The hatching of eggs of general purpose breeds should be commenced now so as to obtain pullets which will start laying at the end of next summer, and cockerels for sale as early table chickens or for breeding.

Selection of Eggs for Hatching.—Eggs for hatching should be at least two ounces in weight, and should be well shaped and have good shells. The hatchability of the eggs will be greatly reduced if the eggs are stored for longer than a few days before being set. The fresher the eggs are the better is the hatch likely to be.

Purchase of Eggs for Hatching.—Only eggs produced by a flock which has been blood tested and found to be free from carriers of Bacillary White Diarrhoea disease, should be purchased for hatching, otherwise there is a grave risk of that disease appearing in the chicks with disastrous results. Such eggs can be obtained from County Poultry Stations and Accredited Poultry Farms.

Lists giving the names and addresses of holders of County Poultry Stations can be obtained from the Secretary of the Committee of Agriculture for the County, and lists giving the names and addresses of owners of Accredited Poultry Farms can be obtained free, on request from the Ministry.

Management of Incubators.—Hints on the setting up and management of an incubator are given in Leaflet No. 20. It is highly important to see that the machine is in perfect working order before the first hatch is started. The capsule should be tested by placing it in a vessel of water heated to about 100 degrees F. If it is in good order the sides will bulge out when it is placed in the water. If the sides do not bulge the capsule is useless and a new one must be obtained. The capsule is the instrument which governs the heating system of an incubator, and is accordingly of vital importance in obtaining satisfactory results from the machine.

It is also necessary to test the thermometer, for if the thermometer is not registering the temperature correctly the hatch will be spoiled although apparently the machine was run at the proper temperature. A thermometer can be tested by comparing the reading against the reading on a Doctor's thermometer, when both are placed in the same vessel of water, or the local chemist will carry out the test.

Fumigation of Incubators.—The fumigation of each incubator before the first hatch of the season and again after each hatch has been completed is a wise precautionary measure against disease. Directions for fumigating with potassium permanganate and formalin, which is a very efficient method, are given in Leaflet No. 59.

Purchase of Incubators.—Full instructions regarding the setting up and running of an incubator are provided by the makers with new machines, and these instructions should be followed carefully. If additional advice is required the Poultry Instructor for the district should be consulted.

The purchase of second-hand incubators and rearing appliances is unwise, unless a full knowledge of their history is known and it is clear that disease was not present on the farm on which they were in use.

Incubator Rooms.—A satisfactory hatch cannot be expected from an incubator, even if managed properly, if it is run in an unsuitable building or room. Adequate ventilation is the most important essential in an incubator room, and to be properly ventilated the room should have ventilators near the floor level, and an opening in the ceiling or an extractor fitted in the roof. With this system of ventilation the fresh air enters the room through the floor ports, circulates up through the machines, and the used air escapes via the ceiling or roof extractor. If an incubator room feels stuffy or there is an odour of paraffin oil, the ventilation is at fault. It must never be forgotten

that a fertile egg is alive, and that life requires oxygen (fresh air) for support and well-being. If there is not sufficient oxygen in the air of the incubator room the chicks may either not hatch or be very weakly and receive a set-back perhaps for life.

Tonics, Condiments and Conditioners.—It appears that quite a large quantity of substances described as tonics, condiments or conditioners, is still being sold in some districts of Northern Ireland. These substances are usually offered at prices far in excess of their intrinsic value, and fantastic claims are made by travelling salesmen regarding the results obtainable from their use. Farmers and poultry keepers are urged not to purchase any such materials before first consulting the Instructor for the district. Materials such as these usually only serve to raise the cost of feeding unduly, and under present conditions when the margin of profit is generally small the use of such materials cannot under any consideration be justified.

Examples of rations suitable for various classes of stock were given in the November issue of this report, and animals fed on rations such as these will obtain from them all the requirements for their needs.

## BREEDING AND MANAGEMENT OF POULTRY FOR HEALTH.

*A Lecture given by Miss J. W. Strang, N.D.D., Chief Instructress, Northamptonshire Institute of Agriculture, at the Meeting of Poultry Breeders, held in Belfast, on 2nd December,* 1938.

Northamptonshire is similar to Northern Ireland in so far as the bulk of the poultry are kept on general farms, but differs in that many of the farms are large, and may carry up to two or three thousand birds each.

All the same I fancy our problems are similar to yours, and a point of most vital interest to all of us at the present time is how to maintain a healthy flock.

Perhaps in dealing with this question of breeding and management for health it would be best for me to explain right away just how I feel about the whole position in regard to the present day mortality. Well, briefly, it is this :—It seems to me that the trouble is due more to a general physical breakdown, rather than to the presence of any specific disease. I feel that the lack of stamina is largely the result of an accumulation of causes, arising from intensivism and from artificial methods. It was only after subjecting poultry to several generations of these conditions that the increase in mortality became so very apparent. And in my opinion it is likely to take just as many generations of breeding from birds kept on sound natural lines to get back to where we were, with stamina.

At a recent Poultry Conference at Harper Adams College, I heard Dr. Allan Fraser, of the Rowett Research Institute, give a most interesting paper on "Fowl Paralysis". In the course of discussion, one speaker suggested that that disease was entirely due to wrong feeding. In reply, Dr. Fraser was emphatic that this could not be so, as cases of paralysis had been diagnosed amongst the poultry at several important nutrition centres, including his own! His contention was that the most up-to-date information on nutrition was available at these centres, and, therefore, they were the last places where poultry would be likely to be affected by a disease caused by wrong nutrition. Of course I do not want to detract from the important work which has been done by our scientists, including Dr. Fraser, but the reply rather confirmed my view. What I mean is that the recent discoveries made with regard to feeding, while most valuable in one direction, may indirectly be a contributing cause of trouble. These discoveries have permitted the keeping of poultry under conditions where they could not have lived before this knowledge was available. Take only one example—the keeping of chickens intensively (i.e., indoors) in the early stages of rearing. This practice only developed after it was discovered that the inclusion of cod liver oil in a ration would prevent leg weakness.

At one time coccidiosis only attacked chickens up to the age of about 7 or 8 weeks; after that age they appeared to be more or less immune. The obvious method of dealing with this disease, therefore, seemed to be to remove chicks from the source of infection by keeping them intensively until they reached the immune age. What was the result? Weakly birds were kept alive under these artificial conditions. They ought never to have survived, and coddling them indoors did away with Nature's law of the survival of the fittest. Incidentally an adult form of the disease developed. No doubt a contributing cause was that these artificially reared birds found their way into the breeding pens, and produced chickens with even less resistance to disease than themselves. So after a few generations of breeding from birds reared intensively, the result is as we see it to-day, a much increased mortality.

Breeding Stock.—I'd like now to say something about breeding stock. In these days it may seem rather a platitude to say that the first essential in all our breeding stock must be stamina. Nevertheless, we ought to become stamina conscious. It is necessary to put stamina in the forefront, and to aim at getting back the standard of health that we had ten years ago.

I feel very strongly that it is wrong to breed from birds which have been kept intensively at any stage in their lives—either during the rearing or as adult birds. Many poultry keepers do make sure that the breeding stock reared on their own farms have enjoyed natural conditions, but a point which should receive just as much attention, is how purchased stock cockerels have been reared. It is surprising how often appearance and records alone are

taken into consideration, and the method of rearing entirely overlooked. This may not be a cause of trouble over here, where you have your own Poultry Breeding Station rearing the cockerels. And, I gather, that many of your stock birds are obtained from the Station. But it really is distressing to me when I find a farmer who is most particular about the methods of his own farm, purchasing stock cockerels without knowing the history of the farm from which they come, because I realise that such cockerels are almost bound to introduce trouble.

The Poultry Technical Committee, in their report, stated that they had been unable to discover any one system or combination of systems, which could be regarded as a factor influencing the extent of disease. To my mind it is just this matter of introducing fresh blood which has made the position so complicated, and were it not for this complication I think it would have been found that certain systems were definitely associated with healthy stock, and others with lack of stamina.

Apart from the points which I have been stressing, two other essentials in the selection of breeders are size and eye colour. Loss of size is often a sign of degeneration. Small, fine-boned birds, seldom breed robust chickens. A bird with a good-sized frame and plenty of bone without coarseness, is much more likely to produce strong vigorous stock. On the question of eye colour, I don't know that it matters so very much whether the eye is red or green, provided the iris and pupil are clear and well defined. On the other hand, I have seen many birds failing to develop good eye colour, due to overcrowding, or some other adverse condition during rearing. Consequently I never select stock cockerels unless they have the right sort of red eyes. This applies to the selection of birds for our Cockerel Sale, which I shall refer to later, as well as the cockerels on our own farm. Apart from whatever bearing eye colour may have on health, a red eye looks so much more attractive, and after all this is a selling point.

In the case of yellow-legged breeds I never select a stock cockerel unless he has plenty of leg pigment. I have observed this point carefully for a considerable time, and I am convinced that a Rhode Island Red, or a cockerel of any other breed which should have yellow legs, but lacks pigment, also usually lacks stamina. This applies equally to pullets before they start to lay.

Stock Cockerels.—Assuming that you cannot get cockerels through your breeding station, where your authorities look after things for you, then I think, given good facilities for rearing, and fresh ground, the best way to buy stock cockerels is probably as eggs. If you do this, then first of all the size of eggs used to produce the chicks can be checked. Secondly, it is in your own hands to feed and rear the chicks properly, and thirdly, you get an indication of their stamina. If the mortality in any particular lot of chicks is

high then it will usually pay to discard the entire brood for breeding, even if there do seem to be one or two good individuals. On the Institute farm we have always used stock cockerels out of hens of the copper ring standard. We fix 200 super and first-grade eggs as a minimum requirement for the parents of our stock cockerels, but so long as they reach the 200 mark we do not insist on anything more in the way of records.

We find that with this standard in our parent stock, and with proper management and feeding, we get all we want in the way of eggs from the progeny.

I don't think it a good thing to leave cockerels in the breeding pens for months on end. I have noticed this particularly on farms which are doing an all the year round table trade. Several of our best farms which are catering for this business find that it pays them to keep a double supply of cockerels, so that they can change them round every few months, as by doing this they seem to get hardier chicks.

Blood Testing.—I see that you have a comprehensive scheme in Northern Ireland for blood testing for Bacillary White Diarrhoea. Well, I'm all in favour of this. I can't see how there can be any doubt at all about the advantages of blood testing, and to my mind there is no evidence that it has had harmful effects in any way.

Housing and Fresh Ground.—Having selected the breeders, and blood-tested them, I am sure it is best to keep them on free range if you have the land and facilities available. Now I think this question of fresh ground for breeding stock is frightfully important, and that it has a definite bearing on the vitality of the chicks which are produced. This point was brought to my notice in a very striking way on a farm that I am in close touch with in Northamptonshire. The farmer is a skilled breeder of pedigree stock. He had about 100 acres of land available for his poultry, and most of his birds were kept on free range—but he had some 200 birds in pens being trap-nested. About two years ago he started hatching all the year round, to supply day-old chicks for table. The hatching eggs were obtained both from the birds in pens, and from those on free range. Incidentally the birds in the pens were own sisters to those on range, but actually they were the best looking ones, picked out for trap-nesting. In the early part of the year there was no noticeable variation in the chicks. By April, May and June, however, the chicks from the range birds were so much more vigorous on hatching than those from the penned birds that the farmer was struck with the difference. On looking into it he satisfied himself that the only factor which could be causing the difference was this matter of free range. He then decided to move the penned birds out of the pens, and gave them free range on fresh

ground. In a short time the chicks from their eggs had improved enormously. As a result of this he went to the expense of fencing round 100 acres of land so as to enable him to give all his breeding stock the benefit of free range—and this is not a man who is doing the job for a hobby. This is his business, and he is making a living out of it.

General Farm.—Now it's obvious, I think, that the general farm provides the best conditions for breeding stock, but not if the birds are kept in the stock-yard, or always on the same acre or two round the farm buildings. The ideal is to move them round the farm as you would other farm stock. The problem which we have been up against in making use of outlying fields has been foxes. However, we have tackled this by providing moveable enclosures. We put up enclosures of two or three acres. The birds are kept in slatted-floor houses within each enclosure. The houses are moved once weekly, and the whole enclosure every few months. The moving is quite a simple matter. Each post is fitted with two hooks, and the wire netting is attached to these hooks. We have a tool called a "drivall" for putting in the posts, and another called a "liftall" for taking them out. An enclosure of this size can be moved by two men, or a man and a boy, in about a day and a half. Actually, in our case, two students working with our Estate carpenter, put in 40 posts in an hour. The posts were 7ft. 6 in. long, and were driven into the ground 18 in.

If free range or moveable enclosures of this type are not a practical proposition, then permanent pens may have to be used, but these pens should be well grazed and rested periodically.

Rearing.—Now about rearing. To my mind the only way to rear really first-class birds, capable of standing the strain of egg-production, is to get them outside on grass by the time they are a week old. Our system is to start the chicks off in a brooder house with an electric hover, for the first few days, till they learn their way out from and in to the hover. They are then put into a portable out-door brooder, with a run attached, on grass. These brooders and runs are moved on to a fresh piece of ground each day. The chicks are started off at the rate of about 70 to a brooder. We give them plenty of heat for the first ten days, but after that reduce it fairly rapidly, and do not provide any artificial heat at all after they are five weeks old. We consider this question of heat to be very important, as, if given heat too long, chicks are never so hardy. At six weeks we move them into night arks, with runs attached. At ten weeks the runs are removed and the chickens are given free range. By the time this stage is reached the number allowed to each ark is about 40 birds.

Adverse Conditions which Lower Vitality.—Even with well-bred stock the vitality of chicks can be so lowered during rearing that they have little

resistance to disease, or parasitic infection. Overcrowding and bad ventilation are two of the most common causes of trouble. Provided birds are not exposed to direct draught, they cannot have too much fresh air during rearing. Bad ventilation, overcrowding and colds can reduce birds to such a state that they will succumb to any disease with which they come in contact.

Feeding Chickens.—We have tried most systems of feeding, and I am convinced that a combination of wet mash and seeds produces the hardiest birds. Chickens fed on wet mash will range more and spend more of their time scratching about on the ground. The exercise in itself is health-giving, but apart from that the chicks consume more grass and other natural food. All this helps to keep them fit.

Feeding Adult Stock.—In our rations for adult stock the protein supplement which we use is fish meal, but we never exceed 10 per cent. in the mash mixture. With birds on range, we find that often it isn't necessary to exceed 3 per cent. to 5 per cent. I know that other protein supplements are recommended as being more economical, but I always feel that white fish meal is about the safest form of animal protein. It is made from healthy fish, and is one of the best sources of mineral matter (phosphates and lime) as well as protein.

Labour.—On the question of labour I think it is a mistake on a poultry farm to do with too little labour. It is very important that anyone looking after birds should have time to observe them, and so spot at once anything which is going wrong.

Cockerel Scheme.—In view of the difficulties associated with a central breeding station scheme, but at the same time realising the need for good stock birds, a scheme was started in Northamptonshire in 1924.

A show and sale of stock cockerels is held in October each year. All the cockerels for this purpose are obtained from the County Accredited Poultry Breeding Stations. In Northamptonshire we can claim to have the best of the county breeders participating in the Accredited Scheme, and the breeding on the stations is carried out in close co-operation with the Institute staff.

Station-holders arrange certain of their breeding pens at the beginning of the season with a view to producing stock cockerels for the next show and sale. It is a condition that the standard of egg production of the stock must be the same as that already described.

The chickens are wing-banded when hatched and are reared on the breeders' farms. Some time before the show and sale, likely purchasers in the district are circularised with particulars of the scheme and asked to send in a note of the number of cockerels of the different breeds which they are likely to require.

The stock cockerels selected by the breeders, and offered for the scheme, are then officially inspected. Those which conform to requirements in the matter of breed type, health and stamina, are marked with a scheme ring. Then, after the birds have been inspected on all the stations, a final selection is made.

All the cockerels chosen have to pass the agglutination test for B.W.D.

The show and sale is held at the Institute of Agriculture, and the birds are staged on the previous day. The show takes place on the morning of the sale, and the birds are judged by two outstanding utility poultry breeders. As the birds have qualified in being of the copper ring standard, egg records are not taken into account. After the judging is completed, the birds are on view to the public, and later in the day they are sold by auction. The upset price is 15/0d., and no vendor may bid for his own birds.

In recent years about 100 birds have been sold annually under the scheme. Last year the number sold was 95 at an average price of £1/15/4d. per head, the highest price being £5/10/0d.

In a general way this scheme has served a useful purpose. It has provided a supply of well-bred stock cockerels, from which poultry breeders and commercial farmers have usually been able to select something suitable for their requirements. In addition to this, the show and sale has proved of definite educational value, in so far as breeders have been set a standard, and have seen how their stock has compared with that of others.

Vendors do not look upon the scheme simply as a means of disposing of a number of their cockerels; they regard it as a source of supply of fresh blood for their own farms.

A criticism which might be made of the scheme is that there is no official check on the records, but it may be perhaps equally satisfactory to have the reputation of the breeders behind their guarantee. It is a scheme, too, which allows scope for the art of the individual breeder, for, after all, this is still largely an art.

To get the full value of cockerel schemes of any kind, however, it is important not to leave off at the selling stage, but to try as far as possible to keep trace of the birds sent out and to see that those which breed true are used to the full.

Certificates for Export.—Before I conclude, just a word about your Import Certificates. I would like to say what an excellent safeguard it is that your Ministry insists on certificates being signed by the local poultry instructor in England, that all imported stock comes from a farm which is free from B.W.D. I personally get the job of signing these certificates from time to time. It may interest you to know that last year I had to refuse to sign certificates on two occasions, because in my opinion, the stock on the farms concerned, was definitely not up to the required standard.

The only suggestion which I would make with regard to this certificate, is that you tighten it up to include diseases other than B.W.D., as in the two cases I have referred to the farms complied with the blood testing regulations, but the stock was not suitable in respect of other diseases. The farms were not, however, Accredited Stations.

## SIXTEENTH EGG LAYING TEST AT STORMONT.

### ANNUAL MEETING OF BREEDERS AND PRESENTATION OF AWARDS.

The annual Conference of Poultry Breeders in connection with the Stormont Egg-Laying Test was held in the Minor Hall, Y.M.C.A., Wellington Place, Belfast, on Friday, 2nd instant, Dr. G. S. Robertson, Secretary to the Ministry, presiding.

The cups and medals won at the last egg-laying test were presented to the winners by Lady Brooke, wife of the Minister of Agriculture, and an address on "The Breeding and Management of Poultry for Health" was given by Miss J. W. Strang, N.D.D., Chief Instructress, Northamptonshire Institute of Agriculture, Moulton, Northampton.

In opening the meeting Dr. Robertson reviewed some of the features of the last test, stating that the championship cup had been won by a pen of White Leghorn pullets, owned by Miss Gilmer, Rashee, Ballyclare, County Antrim, a station-holder under the County Antrim Committee of Agriculture. As this was the first occasion since 1926 that birds of the White Leghorn breed had succeeded in winning the premier award, he thought that everybody would wish to congratulate Miss Gilmer on the performance of this fine pen of birds.

The Rhode Island Red breed, said Dr. Robertson, continued to be more strongly represented in the Test than any other, but it was worthy of note that the Buff Rock breed seemed to be gaining a place amongst the popular breeds of poultry. An increasing number of entries of this breed were being received for the Test, and a pen of Buff Rocks held the leading position in the recent test until the last fortnight.

It was a matter for regret that the mortality figure for the test, of 16.38 per cent., showed a substantial increase on the figure for any of the Ministry's previous tests. The Ministry had always laid emphasis upon the importance of this problem, and the steps which may be taken to solve it. The Poultry Technical Committee, which had been examining the same matter as it affected Great Britain, had published its report during the course of the year. The Committee found that the mortality problem there had its origin in the too rapid expansion of the poultry industry in post-war years, induced by high

egg prices. To meet the unprecedented demand for stock, hatching eggs, and day-old chicks, there was overcrowding of the land, breeding from stock of low vitality and stamina, and an influx to the industry of newcomers lacking in stock sense and poultry experience. These, together with some other factors, had the inevitable effect of presenting the industry in due course with its mortality problem.

In its recommendations for coping with the position, the Committee advocated the compulsory registration of every distributor of stock, hatching eggs and chicks; that hatching eggs should be obtained only from stock that was free from Bacillary White Diarrhoea; the formulation of a scheme for the production of foundation breeding stock; the regulation of auction sales, etc. In considering these recommendations, Dr. Robertson thought that it should be a matter of no little satisfaction to the poultry breeders of Northern Ireland that there was already in operation here, and indeed had been for several years, a scheme or schemes bearing a striking resemblance to what was advocated for Great Britain by the Poultry Technical Committee. We have here provision for blood-testing for Bacillary White Diarrhoea disease at nominal charges, or even free of charge in certain cases. We have our Poultry Stations, which provide facilities for poultry keepers in all districts to obtain hatching eggs from high-grade blood-tested stock at a reasonable price. We have our Accredited Poultry Farms from which hatching eggs and stock may be purchased with a minimum of risk as regards disease. We have also Poultry Instructors who visit farms and give advice and practical instruction to breeders. Consequently, it lay with poultry breeders to make the fullest use of these services. That was the first step in dealing with mortality. The organisation was there, and it lay with poultry breeders to apply the principles and methods that were embodied in that organisation, for everyone is agreed that the very first consideration of a poultry breeder should be the maintenance of a healthy flock.

The cups and medals were then presented to the winners by Lady Brooke, who was received with enthusiasm by the audience.

After this function, Miss Strang gave her address on "The Breeding and Management of Poultry for Health".

## COD LIVER OILS—A WARNING.

Cod liver oil is a valuable and convenient source of Vitamin D—the sunshine vitamin. In the feeding of the poultry breeding stock, and in the rearing of chickens during the winter and early spring months, the addition of from ½ to 1 pint of cod liver oil to every 4 stones of mash is a sound practice. In the case of the breeding stock the oil aids in giving tone to the birds, and

assists in maintaining them in good breeding condition, which leads to the obtaining of improved fertility and hatchability. This is particularly so if it is not possible to run the birds on a range of fresh grass. With chickens which are being reared during sunless weather there is a grave risk of leg weakness and other forms of rickets developing if there is a deficiency of Vitamin D provided and, therefore, the use of cod liver oil to supply that vitamin is an insurance against possible trouble from rickets.

There are on the market different grades and qualities of cod liver oil, and some, unfortunately, are not genuine cod liver oil and do not supply the important Vitamin D. It is possible, in response to a request for cod liver oil, to be supplied with an article which would not have the protective properties of genuine cod liver oil when fed to poultry, and the poultry keeper using such a grade of so-called cod liver oil would be spending money to no purpose.

The genuine cod liver oils are usually sold under a guarantee of vitamin content, and in order to make certain of obtaining the genuine article, purchasers of cod liver oil should refuse to accept a supply of any grade which does not carry such a guarantee.

If cost is made the sole consideration when purchasing cod liver oil and the cheapest grade accepted, it is most likely that an inferior sample will be obtained. The spurious samples, which in reality are not cod liver oils, can be sold at a cheaper price than the genuine article and still leave a handsome profit to the vendor. It is because of their comparative cheapness that sales of such samples for poultry feeding are far too frequent. Money expended on an article which is not capable of fulfilling the object for which it is purchased, however cheap that article may be, is money lost, and it would obviously be better economy to save money by spending more on the genuine article. Besides, the use of the cheap, useless grade of oil will not prevent the troubles which its use is intended to prevent.

All poultry keepers are warned to be on their guard when purchasing cod liver oil for their birds. The name "cod liver oil" is not a sufficient guarantee that the grade offered is satisfactory. The colour of the oil is not a reliable guide as to quality. The price is not a sound basis on which to purchase supplies except that as a general rule the inferior grades are cheaper than the genuine ones. A guarantee of vitamin content is the only safe guide to quality.

# ANNOUNCEMENTS AND REMINDERS.

## GENERAL.

Licensing of Bulls and Boars.—Bulls which were calved during the first six months of this year must be licensed by the 31st March, 1939. Boars which were farrowed on or before 30th September, 1938, must be licensed by the 31st January, 1939. Applications for licences for both bulls and boars of these ages should be lodged with the Ministry as soon as possible, but not later than the 31st December, 1938. Application forms may be obtained from any Police Barracks, from the Secretary, County Committee of Agriculture, or from the Ministry. The keeping of unlicensed bulls or boars is likely to lead to a prosecution.

Accredited Poultry Farms.—Lists giving the names and addresses of owners of Accredited Poultry Farms for the 1939 season have now been published and can be obtained from the Ministry, free on request. All the birds on these farms have passed the test for Bacillary White Diarrhoea.

Report of the Sixteenth Egg-Laying.—Copies of this report are now available and can be obtained, free, on request. This report contains full particulars of the performances of the birds which competed at the test.

Supply of Forestry Trees.—Farmers can now obtain supplies of young forest trees from the Ministry's nurseries at the reduced rate of 30/- per 1,000. Particulars of the Forestry Scheme and of the varieties of trees available will be sent on request.

Land Fertility Scheme.—Farmers are reminded that under this scheme, lime and British made basic slag can be obtained at considerably reduced rates provided that lots of not less than 2 tons are purchased. To obtain these concessions purchases must be made from approved suppliers. Lists giving the names and addresses of approved suppliers may be seen at any creamery or police barracks.

Leaflets.—A list of the leaflets published by the Ministry is given on the last page of this report. Copies of any of these leaflets can be obtained free on request.

Training for Girls.—The next term at the North West School, Strabane, begins on Tuesday, 3rd January, 1939, and the next term at the Ulster Dairy School, Cookstown, on Tuesday, 10th January, 1939. Further particulars regarding these facilities for obtaining instruction in Poultry keeping, Dairying and Rural Housewifery, are given in the article on page 469.

LECTURES.—The following lectures have been arranged by County Committees of Agriculture.

| County. | Day and date. | Centre. | Time. | Subject. |
|---|---|---|---|---|
| Down | Friday, 16th Dec. | Killowen Old School | 8-0 p.m. | Cultivation of Fruit and Vegetables. |
| | Wed., 4th Jan. | Drumaness P.E. School | 8-0 p.m. | Vegetable Cultivation |
| | Wed., 11th Jan. | Drumaness P.E. School | 8-0 p.m. | Cultivation of Flowers |
| Londonderry | Tuesday, 10th Jan. | Terrydremond P.E. School, Limavady | 7-0 p.m. | Profitable Poultry Keeping. |
| Tyrone | Friday, 16th Dec. | Tyrcur P.E. School, Omagh | 7-0 p.m. | Land Fertility Scheme |

WIRELESS BROADCASTS.—The following arrangements for broadcasts have been made.

| Date. | Subject. | Time. | Speakers. |
|---|---|---|---|
| 2nd Jan., 1939 | Talk on cattle diseases, including Contagious Abortion, Sterility, and Mastitis. | 9-40 to 10-0 p.m. | Mr. H. G. Lamont, M.Sc., M.R.C.V.S., Ministry of Agriculture. |
| 16th Jan., 1939 | Discussion on Arable versus Grass Farming. | 8-40-9-0 p.m. | Mr. G. Low, Agr. Research Institute, Hillsborough and Mr. R. Irwin, The Manor Farm, Donaghadee. |
| 30th Jan., 1939 | Talk on Breeding of Farm Horses and care of Brood Mares. | not yet fixed. | Mr. J. C. Drennan, J.P., Carse Hall, Limavady. |

# SCHOOLS NEWS.

## TRAINING OF GIRLS AT THE MINISTRY'S SCHOOLS.

NORTH WEST SCHOOL, STRABANE.

The next term at this school will commence on the 3rd January and terminate on the 24th March, 1939.

The North West School provides a sound practical training in modern economical methods of dairying, poultry-keeping and rural housewifery. Scholarships tenable at the school, and covering the cost of tuition, board and residence, are awarded by each County Committee of Agriculture in Northern Ireland. Application for one of these scholarships should be made to the Secretary or Agricultural Organiser of the County Committee of Agriculture for the county in which the applicant resides. The minimum age for admission is 16 years.

ULSTER DAIRY SCHOOL, COOKSTOWN.

The terms at this school have been changed and, in future, instead of holding four terms in a year as formerly, the Ministry has decided to hold three terms each year, each of approximately 15 weeks' duration, commencing respectively in January, May and September. The next term will commence on the 10th January and terminate on the 21st April, 1939. Although the fees have been increased by one guinea per term the total fees for the ordinary Certificate Course will be £8 8s. 0d. instead of £9 9s. 0d., as that Course will be completed in two terms instead of three.

The Ulster Dairy School provides a most up-to-date training in all matters connected with women's activities in farm life. Admission to this school is by Assisted Scholarships, which enable pupils to obtain board, residence and training for each of the two terms comprising the ordinary school course at the nominal inclusive fee of £4 4s. 0d. per term. The minimum age for admission to this school is 17 years, and applications should be sent to the Secretary, Ministry of Agriculture, Stormont, Belfast.

Early application for admission to either school is essential, as equally suitable candidates are admitted in the order in which their applications are received. There is no qualifying examination either for the Scholarships to the North West School, or for admission to the Ulster Dairy School.

Prospectuses of both schools, containing forms of application for admission, can be obtained from the Ministry free of charge and post free.

## LIVE STOCK BREEDING ACT (NORTHERN IRELAND) 1922.

### COMPULSORY LICENSING OF BULLS.

Owners of bulls which were born in January, February, March, April, May and June, 1938, are reminded that such animals must be licensed by the 31st March, 1939, and that applications for licences on the prescribed forms must reach the Ministry's offices not later than the 31st December, 1938.

A list of centres at which bulls will be inspected for licences, together with application forms, may be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast, or from any police barracks.

The penalty for keeping an unlicensed bull is £20.

## REGISTER OF ACCREDITED POULTRY FARMS.

The Register of Accredited Poultry Farms in Northern Ireland for the hatching season 1938/39 is now available for distribution, and copies may be

obtained free and post free from the Secretary, Ministry of Agriculture, Stormont, Belfast. This Register contains the names of breeders who have complied with the provisions of the Ministry's Scheme for the Registration of Accredited Poultry Farms.

The entire stock on each of these farms has been blood-tested, and was shown by the test to be free from Bacillary White Diarrhoea, and, in addition, all birds included in the breeding pens have been rigorously culled, and those in the pens mated for the production of pure bred stock are marked with officially sealed and numbered rings. Eggs for hatching, and birds may, therefore, be purchased from these farms with a minimum of risk as regards disease.

## ULSTER HORTICULTURAL SOCIETY'S SHOW.

At the recent show held in the King's Hall, Balmoral, the display of fruit in the Packed Fruit Section was well up to the standard of previous years, and demonstrated beyond all doubt that even in a year of adverse weather conditions apples of high-class quality can be produced in Northern Ireland. The number of entries was below the average of a number of years past, but that was only to be expected, as the frosts of the late spring left many of the orchards entirely without fruit, and in many others the crop was only a very small proportion of the normal.

The production of apples of good quality is largely dependent on the control of the various insect pests and fungoid diseases which attack both the trees and the fruit. Fortunately for apple growers in Northern Ireland the means for controlling these pests and diseases are within their reach, and it only remains for them to carry out the control measures thoroughly and systematically to ensure that a large percentage of their crops of apples will be of that high standard of quality which will result in a profit to the grower. The adoption of these control measures (which are explained in detail in leaflets issued by the Ministry) admittedly involves an expenditure of money, but it has been repeatedly demonstrated that the grower who incurs this outlay is well repaid.

One of the prize-winning exhibitors at the recent show owns less than one acre of apple orchard. For twenty years after it was planted this orchard received little or no attention, and it was only some five years ago that the

owner began to put it in order. By careful pruning and manuring, and by following a suitable spraying programme each year the owner has succeeded in getting it into a high state of production. He has been successful in winning prizes at previous shows, and this year was again successful, though competing with some of the most experienced fruit growers in Northern Ireland. In addition to this, he estimates the value of his 1938 apple crop to be about £100. This case is typical of many others throughout the country, but there still remain, unfortunately, too many orchards indifferently cultivated, the crop from which is of such poor quality that it not only results in no profit to the producers, but its presence on the market reacts unfavourably on the price of better grown apples.

## SEVENTEENTH EGG LAYING TEST AT STORMONT.

The second period of four weeks ended on the 25th November, 1938. Moulting is still severe in many pens, but notwithstanding this there was an increase in egg production, and a very definite increase in the number of scoring eggs.

The total number of eggs laid by the competing birds was 8,670, which gives an average of 11.46 eggs per bird, as compared with 10.42 for the previous period. Of the 8,670 eggs laid, 6,374 (73.51 per cent.) were scoring eggs, i.e., 2 oz. or over in weight.

The highest sectional average egg production is to the credit of the White Wyandottes in Section 2, viz., 15.1 eggs per bird, the White Wyandottes in Section 1 being next with an average of 14.2 eggs per bird.

Five birds died during the period, bringing the total deaths to the end of the second period to 9. This represents a mortality rate of 1.19 per cent., as compared with 1.7 per cent. for the corresponding 8 weeks of the previous test.

The following are particulars of the leading pens in each Section.

SECTION 1. WHITE WYANDOTTES (Open). 21 Pens.

| Position | No. of Pen | Name and Address of Owner. | Number of eggs laid | | | | Test Score |
|---|---|---|---|---|---|---|---|
| | | | Super Grade | 1st Grade | 2nd Grade | Below 2nd Grade | |
| 1 | 16 | Mrs. A. Peel, Oakleigh, Roses Lane Ends, Belfast. | 35 | 156 | 42 | — | 191 |
| 2 | 1 | Mrs. K. Bamforth, Merchison, Melmount Rd., Strabane, Co. Tyrone. | 75 | 100 | 12 | — | 175 |
| 3 | 12 | Mr. J. Lenaghan, Tyconnett, Ballynahinch, Co. Down. | 21 | 146 | 22 | — | 167 |
| 4 | 19 | Dr. J. Stuart, Killyflue, Ballymena, Co. Antrim. | 16 | 138 | 96 | 1 | 154 |
| 5 | 11 | Mr. J. Lenaghan, Tyconnett, Ballynahinch, Co. Down. | 28 | 123 | 25 | — | 151 |

SECTION 2. WHITE WYANDOTTES (Stationholders). 10 Pens.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 30 | Mrs. M. J. Veitch, Knockninny, Thompson's Bridge, Enniskillen, Co. Fermanagh. | 76 | 112 | 17 | — | 188 |
| 2 | 25 | Miss A. Brown, Ballyhill, Crumlin, Co. Antrim. | 32 | 152 | 33 | — | 184 |
| 3 | 28 | Mrs. M. M'Bride, Ackinduff, Cabragh, Dungannon, Co. Tyrone. | 31 | 99 | 40 | 2 | 130 |

SECTION 3. WHITE LEGHORNS (Open). 10 Pens.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 39 | Mr. J. Telford, Drumarkin, Rathfriland, Co. Down. | 40 | 116 | 43 | 1 | 156 |
| 2 | 41 | Mr. J. Waugh, Aldfreck, Ballycarry, Belfast. | 35 | 108 | 57 | — | 143 |
| 3 | 34 | Mrs. H. M. Fletcher, Ashgrove, Lisadian, Hillsborough, Co. Down. | 11 | 74 | 36 | — | 85 |

SECTION 4. WHITE LEGHORNS (Stationholders). 11 Pens.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 44 | Miss S. Craig, Ballyboley Junction, Ballynure, Co. Antrim. | 43 | 127 | 47 | — | 170 |
| 2 | 52 | Mrs. J. Short, Tullyvally, Seskinore, Omagh, Co. Tyrone. | 35 | 95 | 96 | 1 | 128 |
| 3 | 50 | Miss I. J. Magill, Mulloughdrin, Dromara, Co. Down. | 17 | 106 | 74 | 5 | 123 |

SECTION 5. RHODE ISLAND RED (Open). 29 Pens.

| Position | No. of Pen | Name and Address of Owner. | Number of eggs laid | | | | Test Score |
|---|---|---|---|---|---|---|---|
| | | | Super Grade | 1st Grade | 2nd Grade | Below 2nd Grade | |
| 1 | 66 | The Marquis of Hamilton, Baronscourt, Omagh, Co. Tyrone. | 59 | 126 | 19 | — | 185 |
| 2 | 73 | Mrs. J. M'Neill, Drain's Bay, Larne, Co. Antrim. | 90 | 90 | 9 | — | 180 |
| 3 | 67 | Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh. | 11 | 125 | 32 | — | 136 |
| 4 | 74 | Mr. R. J. O'Hanlon, Mullahead, Tanderagee, Co. Armagh. | 53 | 57 | 83 | 1 | 110 |
| 5 | 69 | Mr. J. M'Cormick, Crosshill, Crumlin, Co. Antrim. | 8 | 98 | 10 | — | 106 |

SECTION 6. RHODE ISLAND RED (Stationholders). 11 Pens.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 83 | Mrs. H. H. Dickson, Lower Coagh, Co. Tyrone. | 47 | 153 | 42 | — | 200 |
| 2 | 92 | Mrs. H. Rea, Lisowen, Listooder Crossgar, Co. Down. | 62 | 113 | 14 | 1 | 175 |
| 3 | 89 | Miss S. M'Kee, Ardmillan House, Killinchy, Co. Down. | 34 | 125 | 53 | — | 159 |

SECTION 7. ANY OTHER PURE BREED (Open). 25 Pens.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 108 | Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry. (Buff Rock.) | 95 | 83 | 23 | — | 178 |
| 2 | 107 | Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry. (Buff Rock). | 45 | 131 | 77 | — | 176 |
| 3 | 106 | Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry. (Buff Rock). | 29 | 113 | 119 | 4 | 142 |
| 4 | 113 | Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry. (Black Leghorn). | 26 | 95 | 70 | 4 | 121 |
| 5 | 102 | Mr. J. Ronan, Kinghill, Cabra, Newry, Co. Down. (Light Sussex). | 43 | 69 | 36 | 1 | 112 |

SECTION 8. POULTRY CLUBS AND YOUNG FARMERS' CLUBS.

| Position | No. of Pen | Name and Address of Owner. | Number of eggs laid | | | | Test Score |
|---|---|---|---|---|---|---|---|
| | | | Super Grade | 1st Grade | 2nd Grade | Below 2nd Grade | |
| 1 | 120 | Ballywalter Young Farmers' Club, Co. Down. (Rhode Island Red). | 59 | 88 | 22 | — | 147 |
| 2 | 123 | Donaghadee Poultry Club, Co. Down. (Rhode Island Red). | 28 | 108 | 24 | — | 136 |
| 3 | 128 | Brookeborough Poultry Club, Co. Fermanagh. (White Wyandotte). | 43 | 91 | 69 | 2 | 134 |

"Test Score" means the total of the super-grade and first-grade eggs.

The leading pen in the entire test at the end of the second period is No. 30, entered by Mrs. H. H. Dickson in the Stationholders' Section for Rhode Island Reds, while second place is occupied by Mrs. A. Peel's Pen, No. 16, of White Wyandottes in Section 1.

# PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st December, 1938, in ten representative centres in Northern Ireland.

| | Antrim | Armagh | Ballymena | Belfast | Castlewellan | Coleraine | Dungannon | Enniskillen | Omagh | Strabane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Protein Foods :** | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| Linseed (whole) .. .. | 13 0 | 16 0 | 16 0 | 16 0 | — | 18 0 | — | 16 6 | — | — |
| Linseed Cake, home-made .. | — | 12 6 | 12 0 | 12 0 | — | 12 6 | 13 6 | 12 0 | 12 0 | — |
| Linseed Cake, foreign .. .. | 11 6 | 12 0 | 11 3 | 11 0 | 11 9 | 12 0 | 11 6 | 11 6 | 11 0 | 10 9 |
| Linseed Cake Meal .. .. | 11 6 | 12 6 | 11 3 | 11 0 | 11 9 | 11 6 | 13 0 | 12 6 | 11 6 | 11 0 |
| Cotton Cake, decorticated .. | 9 6 | — | 9 6 | 10 0 | 10 0 | 9 6 | 10 6 | 10 6 | 9 6 | 10 0 |
| Earthnut Cake, decorticated .. | 9 0 | — | 8 7½ | 9 0 | — | 9 0 | 10 0 | 8 6 | 8 9 | 9 6 |
| Soya Bean Meal (extracted) .. | 10 6 | 11 0 | 10 6 | 10 0 | — | 12 0 | 10 6 | 10 6 | 11 0 | — |
| Fish Meal (60% protein) .. | 17 0 | 16 6 | 16 6 | 16 6 | — | 16 6 | 17 0 | 17 6 | 16 6 | 16 6 |
| Meat Meal (60% protein) .. | 16 6 | 15 0 | 14 0 | 14 0 | 14 0 | — | 15 6 | — | 15 0 | 16 6 |
| Meat and Bone Meal (40% protein) | — | 11 0 | 10 0 | 9 6 | — | 10 6 | 9 6 | — | — | 10 6 |
| **Medium Protein Foods :** | | | | | | | | | | |
| Palm Kernel Cake .. .. | 9 0 | — | 8 6 | — | — | 9 6 | — | — | — | — |
| Palm Kernel Meal .. .. | 9 0 | — | 8 0 | 7 9 | — | 9 6 | — | — | — | — |
| **Starchy Foods :** | | | | | | | | | | |
| Maize (whole) .. .. .. | 6 6 | 6 9 | 6 9 | 6 3 | — | 7 0 | — | — | — | — |
| Maize Meal .. .. .. | 6 9 | 7 0 | 6 9 | 7 0 | 7 3 | 7 0 | 7 6 | 7 3 | 6 9 | 7 0 |
| Maize Flaked .. .. .. | 7 3 | 7 6 | 7 3 | 7 6 | 7 6 | 7 9 | 8 0 | — | 7 6 | 8 3 |
| Wheat (whole) .. .. | 7 0 | 6 6 | 6 6 | 6 6 | 6 3 | 6 6 | — | 8 6 | 6 6 | — |
| Bran, Red .. .. .. | 6 9 | 7 6 | 6 1½ | 7 9 | — | 6 9 | 7 9 | 8 0 | 7 0 | 6 6 |
| Bran, White .. .. .. | 7 9 | 9 0 | 7 9 | 8 6 | 8 3 | 8 0 | 8 9 | 8 9 | 8 3 | 8 6 |
| Pollard, Brown .. .. | 7 0 | 7 6 | 7 0 | 7 9 | — | 7 6 | 8 0 | 8 0 | 7 3 | 6 6 |
| Pollard, White .. .. | — | 8 6 | 7 6 | 8 6 | 8 3 | 7 9 | 8 10½ | 8 9 | 8 0 | 8 6 |
| Barley Meal .. .. .. | 7 0 | 7 6 | 7 3 | 7 6 | 7 6 | 7 6 | 8 0 | 8 0 | 7 6 | 7 9 |
| Tapioca Root Flour .. .. | — | 8 0 | 7 0 | 7 3 | — | — | — | 8 0 | — | — |
| Oats (whole) .. .. .. | 7 0 | 6 6 | 6 0 | 6 6 | 5 6 | 6 6 | 8 0 | 7 4 | 5 3 | 5 0 |
| Crushed Oats .. .. | 7 6 | 7 3 | 6 6 | 7 0 | 6 0 | 7 0 | — | 8 4 | — | 6 0 |

NON-CONCENTRATES :—The average prices at representative markets at the beginning of December, 1938, were as follows :—Potatoes (Main Crop), 2/8¼d per cwt.; Upland Hay, 61/2d. per ton; Meadow Hay, 40/9d. per ton; Oat Straw, 39/10d. per ton.

# AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st December, 1938, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

| | Protein Equivalent | Starch Equivalent | Average price per cwt. at 1st Dec. 1938 | Average price per cwt. at 1st Nov. 1938 | Cost per unit of protein equivalent Dec. | Cost per unit of protein equivalent Nov. | Cost per unit of starch equivalent Dec. | Cost per unit of starch equivalent Nov. |
|---|---|---|---|---|---|---|---|---|
| **Protein Foods** | | | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| Linseed | 19.0 | 119.0 | 15 11 | 15 10 | 16 9 | 16 8 | 2 8 | 2 8 |
| Crushed linseed | 19.0 | 119.0 | 17 2 | 17 7 | 18 1 | 18 6 | 2 11 | 3 0 |
| Linseed cake (home-made) | 25.0 | 72.0 | 12 4 | 12 4 | 9 10 | 9 10 | 3 5 | 3 5 |
| Linseed cake (froeign) | 25.0 | 72.0 | 11 5 | 11 3 | 9 1 | 9 0 | 3 2 | 3 2 |
| Linseed cake meal | 25.0 | 72.0 | 11 9 | 11 10 | 9 5 | 9 6 | 3 3 | 3 3 |
| Decorticated Cotton cake | 35.0 | 71.0 | 9 11 | 9 7 | 5 8 | 5 6 | 2 10 | 2 8 |
| Decorticated Earthnut cake | 41.0 | 73.0 | 9 1 | 9 1 | 4 5 | 4 5 | 2 6 | 2 6 |
| Extracted Soya bean meal | 38.0 | 64.0 | 10 9 | 10 8 | 5 8 | 5 7 | 3 4 | 3 4 |
| Fish meal (60% protein) | 53.0 | 59.0 | 16 9 | 16 8 | 6 4 | 6 3 | 5 8 | 5 8 |
| Meat meal (60% protein) | 55.0 | 61.0 | 15 1 | 15 1 | 5 6 | 5 6 | 4 11 | 4 11 |
| Meat & bone meal (40% protein) | 36.0 | 44.0 | 10 2 | 10 2 | 5 8 | 5 8 | 4 8 | 4 8 |
| **Medium Protein Foods** | | | | | | | | |
| Palm kernel cake | 17.0 | 75.0 | 9 0 | 8 9 | 10 7 | 10 3 | 2 5 | 2 4 |
| Palm kernel meal | 17.0 | 75.0 | 8 7 | 8 8 | 10 1 | 10 2 | 2 3 | 2 4 |
| **Starchy Foods** | | | | | | | | |
| Maize | 6.8 | 81.0 | 6 8 | 7 2 | 19 7 | 21 1 | 1 8 | 1 9 |
| Maize meal | 6.8 | 81.0 | 7 0 | 7 4 | 20 7 | 21 7 | 1 9 | 1 10 |
| Flaked maize | 8.6 | 83.0 | 7 7 | 8 0 | 17 8 | 18 7 | 1 10 | 1 11 |
| Wheat | 9.6 | 72.0 | 6 9 | 7 2 | 14 1 | 14 11 | 1 10 | 2 0 |
| Red Bran | 10.0 | 43.0 | 7 2 | 7 7 | 14 4 | 15 2 | 3 4 | 3 6 |
| White bran | 10.0 | 43.0 | 8 4 | 9 1 | 16 8 | 18 2 | 3 10 | 4 3 |
| Brown pollard | 11.0 | 60.0 | 7 5 | 7 9 | 13 6 | 14 1 | 2 6 | 2 7 |
| White pollard | 11.0 | 60.0 | 8 4 | 8 9 | 15 2 | 15 11 | 2 9 | 2 11 |
| Barley meal | 7.0 | 70.0 | 7 7 | 7 9 | 21 8 | 22 2 | 2 2 | 2 3 |
| Oats | 7.6 | 60.0 | 6 4 | 6 5 | 16 7 | 16 11 | 2 1 | 2 2 |
| Crushed oats | 7.6 | 60.0 | 6 11 | 7 2 | 18 2 | 18 10 | 2 4 | 2 5 |
| Tapioca root flour | 1.0 | 83.5 | 7 7 | 7 7 | 151 8 | 151 8 | 1 10 | 1 10 |
| **Non-Concentrates** | | | | | | | | |
| Potatoes | 0.6 | 18.0 | 2 8¼ | 2 8½ | 89 7 | 90 3½ | 3 0 | 3 0 |
| Upland hay | 4.9 | 24.0 | 3 0¾ | 2 11¼ | 12 6 | 11 11¾ | 2 6½ | 2 5½ |
| Meadow hay | 4.6 | 31.0 | 2 0½ | 2 1½ | 8 10½ | 9 2¾ | 1 3¾ | 1 4½ |
| Oat straw | 0.9 | 20.0 | 2 0 | 2 0 | 44 5½ | 44 5½ | 2 0 | 2 0 |

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately $2\frac{1}{2}$ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

| | Water. | Protein. | Oil. | Carbohydrates. |
|---|---|---|---|---|
| **Non concentrates** | | | | |
| Swede turnips ... | 88 | 1 | 0.2 | 9 |
| Potatoes ... ... | 75 | 2 | 0.1 | 21 |
| Cabbage ... ... | 89 | 1.5 | 0.5 | 8 |
| Oat Straw ... ... | 14 | 4 | 2 | 37 |
| Meadow hay ... | 10 | 10 | 3 | 45 |
| Pasture grass ... | 80 | 3.5 | 0.8 | 10 |
| **Fattening Foods** | | | | |
| Crushed oats ... | 13 | 9 | 6 | 60 |
| Maize meal ... | 12 | 10 | 4 | 70 |
| Barley meal ... | 13 | 12 | 2 | 66 |
| Pollard ... | 13 | 15 | 5 | 57 |
| **Flesh forming foods** | | | | |
| Decorticated Cotton cake ... ... | 9 | 40 | 9 | 26 |
| Decorticated Earthnut cake ... ... | 10 | 46 | 7 | 23 |
| Meat meal ... | 11 | 60 | 6 | — |
| Soya bean meal ... | 11 | 44 | 1.5 | 32 |

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) The quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the foodstuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given in the table on page 477, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 477 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

| | | | |
|---|---|---|---|
| Decorticated cotton cake | ... | ... | 5/8d. |
| Decorticated earthnut cake | ... | ... | 4/5d. |
| Soya bean meal | ... | ... | 5/8d. |

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

| | | | |
|---|---|---|---|
| Soya bean meal | ... | ... | 5/8d. |
| Meat meal (60% protein) | ... | ... | 5/6d. |
| Meat and bone meal (40% protein) | ... | | 5/8d. |

Therefore meat meal (60% protein) is the cheapest milk substitute for pigs at the present prices of purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/11d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade both from the thriving point of view and its effect on the quality of the bacon.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

# PRICES OF FERTILISERS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per ton of fertilisers at 1st December, 1933, at representative centres in Northern Ireland.

| | Antrim | Armagh | Ballymena | Belfast | Castlewellan | Coleraine | Dungannon | Enniskillen | Omagh | Strabane |
|---|---|---|---|---|---|---|---|---|---|---|
| | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| **Nitrogenous Manures :** | | | | | | | | | | |
| Nitrate of Soda (15.5% N.) .. | 8 5 0 | — | — | 8 0 0 | — | — | — | — | — | — |
| Sulphate of Ammonia (20.6% N.) | 8 0 0 | — | — | 7 10 0 | 8 0 0 | — | 8 0 0 | — | 8 2 6 | 8 10 0 |
| Nitro Chalk (15.5% N.) .. | 8 5 0 | — | — | 7 10 0 | 8 5 0 | — | 8 15 0 | — | 8 12 6 | 8 12 6 |
| **Phosphatic Manures :** | | | | | | | | | | |
| Superphosphate (16% S.P.A.) .. | — | — | — | 3 15 0 | — | 3 15 0 | — | 4 0 0 | 4 2 6 | 4 5 0 |
| Semsol (5% S.P.A., 15½% P.A.) .. | 3 10 0 | 3 10 0 | 3 5 0 | 3 0 0 | 3 5 0 | 3 5 0 | 3 10 0 | 3 12 0 | 3 10 0 | 3 10 0 |
| *Basic Slag (16% to 17% P.A.) .. | — | — | — | 2 18 0 | — | — | — | — | — | — |
| *Basic Slag (18% to 20% P.A.) .. | — | — | — | 3 6 0 | — | — | — | — | — | — |
| Gafsa Rock Phosphate (26% P.A.) | 3 5 0 | 3 5 0 | 3 0 0 | 2 15 0 | 3 0 0 | 3 0 0 | 3 5 0 | 3 5 0 | 3 7 6 | 3 5 0 |
| **Potash Manures :** | | | | | | | | | | |
| Kainit (14% P.) .. .. | 3 12 6 | 3 10 0 | — | 3 15 0 | — | — | 3 12 6 | — | 3 12 6 | 3 10 0 |
| Potash Salts (20% P.) .. .. | 4 10 0 | 4 10 0 | — | 4 0 0 | — | 4 5 0 | 4 10 0 | — | 4 10 0 | 4 10 0 |
| Potash Salts (30% P.) .. .. | 5 15 0 | 6 0 0 | — | 5 10 0 | — | — | 5 15 0 | — | 5 15 0 | 5 17 6 |
| Muriate of Potash (50% P.) .. | 8 17 6 | — | — | 9 0 0 | — | — | — | — | 9 0 0 | 9 0 0 |
| **Agricultural Salt** .. .. | 2 10 0 | 2 0 0 | — | — | — | — | 3 0 0 | 1 17 6 | — | 3 0 0 |

Abbreviations : N—Nitrogen. S.P.A.—Soluble Phosphoric Acid. P.A.—Phosphoric Acid. P—Potash.

* If obtained under the Land Fertility Scheme, the price of British made basic slag will be 25 per cent. less than the figures quoted, since a subsidy equivalent to one-quarter is payable. The prices for British basic slag, c.i.f. Belfast and Londonderry are fixed by the Land Fertility Committee and are the same at both these ports. The retail prices at Belfast given above are based on these c.i.f. prices plus the charges approved by the Committee for unloading and distribution. The price at any other centre will be the price at Belfast or Londonderry plus the carriage from the port to the particular centre.

The cost of the unit of fertilising ingredient is determined by dividing the price per ton by the percentage of the ingredient contained in the manure, and this method of determining values is the only sound basis on which two different manures or two grades of the same manure, supplying the same fertilising ingredient, can be compared. The price per ton is not a reliable guide as to which is the better value for money. For example, at the prices ruling at Belfast for the various manures, as shown on the table on page 482 the costs of the units of the fertilising ingredients are as follow:—

| | | |
|---|---|---|
| Nitrate of Soda (15.5% N.) | 10/3¾ | (Nitrogen) |
| Sulphate of Ammonia (20.6% N.) | 7/3½ | ,, |
| Nitro Chalk (15.5% N.) | 9/8¼ | ,, |
| Superphosphate (16% S.P.A.) | 4/8¼ | (Phosphoric Acid) |
| Semsol (5% S.P.A., 15½% P.A.) | 2/11 | ,, |
| Basic Slag (16% P.A.) | 3/7½ | ,, |
| Basic Slag (19% P.A.) | 3/5¾ | ,, |
| Gafsa Rock Phosphate (26% P.A.) | 2/1½ | ,, |
| Kainit (14% P.) | 5/4¼ | (Potash) |
| Potash Salts (20% P.) | 4/– | ,, |
| Potash Salts (30% P.) | 3/8 | ,, |
| Muriate of Potash (50% P.) | 3/7¼ | ,, |

It is seen that the price of 14% Kainit is £3 15s. 0d. per ton, and of 30% Potash Salts is £5 10s. 0d. per ton, and it might be concluded that the Kainit was the better value for money. This is not so. The 30% Potash Salts contains more than twice as much Potash as the Kainit, and is, therefore, a cheaper source of potash when the price is even double that at which Kainit is offered. The cost of a unit of potash in the 30% Potash Salts is seen to be only 3/8d., whereas the cost of a unit of potash in Kainit is 5/4¼d. At the prices ruling for these manures, 30% Potash Salts is, therefore, better value for money than Kainit. Similarly, it is seen that at the prices prevailing at Belfast Gafsa Rock Phosphate is the cheapest source of phosphoric acid and Sulphate of Ammonia is the cheapest source of Nitrogen.

In connection with the costs of the units of phosphoric acid, as shown in the table on the previous page, it should be noted that in the case of Superphosphate, the cost is that of a unit of soluble phosphoric acid: whereas in the cases of Basic Slag, Semsol, and Gafsa Rock Phosphate, the figures represent the cost of a unit of insoluble phosphoric acid. It would not, therefore, be correct to compare the unit price of the phosphoric acid in Superphosphate with those of the phosphoric acid in the other three. It should also be noted that the costs of the units of phosphoric acid in basic slag will be less than the figures shown above, if that manure is purchased under the terms of the Land Fertility Scheme.

# TRADE AND PRICES OF LIVE STOCK AT BELFAST AUCTION MARTS.

With the exception of one week of light supply in the middle of the month, offerings of beef cattle at the Belfast auction sales, held during November, continued to show a seasonal increase. There was a full complement of buyers all month, and the heavier supplies were readily absorbed at prices which had a slight but steady upward trend. The average price for the month was 1/- above the October figure at 33/- per live cwt. Values, however, remained considerably lower than for the corresponding period last year, and the November average was 4/3d. lower than November, 1937. As a general rule prices during the month were as follow:—

| | | |
|---|---|---|
| Top quality | .. .. | from 32/– to 38/– per live cwt. |
| Good commercial animals | .. | „ 31/– to 36/– „ „ |
| Rough and unfinished cattle | | „ 29/– to 34/6 „ „ |

The following table shows the average prices of fat cattle during the past five weeks, compared with the corresponding dates in 1937:—

| *Week ended* | *per cwt.* s. d. | *Week ended* | *per cwt.* s. d. |
|---|---|---|---|
| 5th November, 1938 | .. 32 0 | 6th November, 1937 | .. 35 6 |
| 12th „ „ | .. 32 0 | 13th „ „ | .. 36 3 |
| 19th „ „ | .. 33 0 | 20th „ „ | .. 37 9 |
| 26th „ „ | .. 33 6 | 27th „ „ | .. 38 3 |
| 3rd December, „ | .. 34 0 | 4ht December „ | .. 38 0 |
| Average for month | .. 33 0 | Average for month | .. 37 3 |

In the store cattle end also supplies were heavier than in October, and generally speaking prices were firm with a tendency to rise. Trade showed some recovery during November, and at the close of the month prices rose to higher levels. Large forward animals for finishing at from £12 10s. 0d. to £15 per head, and good young sorts for longer keep at from £7 10s. 0d. to £10 10s. were best sellers throughout the month.

Supplies of dairy cattle decreased on the month, and with the good fast trade ruling prices hardened by about 10/- per head on average. Good springing cows and newly-calved cows were in strong demand, top grades fetching as much as £30 and £32 each.

Fat sheep and lambs were offered in smaller number, and trade was quietly steady all month. Quality stock found a ready sale at firmer rates, and as a general rule secondary animals maintained previous prices.

# PRICES OF OTHER STOCK AT THE BELFAST AUCTION MARTS.

| Description. | | Week ended 5-11-38 | Week ended 12-11-38 | Week ended 19-11-38 | Week ended 26-11-38 | Week ended 3-12-38 |
|---|---|---|---|---|---|---|
| **Fat Cows** .. .. | Range of 1st quality | £12 to £16 | £13 to £17 | £12 to £16-5 | £12 to £16-5 | £14 to £18 |
| | ,, 2nd ,, | £8 to £13 | £8 to £13-10 | £6 to £12-10 | £8 to £13 | £10 to £13-10 |
| **Store Cattle :** | | | | | | |
| Forward Stores .. | Range of 1st quality | £12-10 to £14 | £13-10 to £15 | £12-10 to £14-10 | £12 to £15-7-6 | £13 to £15 |
| | ,, 2nd ,, | £8-15 to £12-5 | £11 to £13 | £8-15 to £12-5 | £9-10 to £14-5 | £11-10 to £12-15 |
| Calves (under 12 months) | ,, 1st ,, | £7-10 to £10-10 | £9-5 to £10-10 | £7-10 to £8 | £10-10 to £12-5 | £9 to £11-5 |
| | ,, 2nd ,, | £5-5 to £7 | £6-5 to £8 | £5-10 to £7 | £7-2-6 to £9 | £7-2-6 to £8-10 |
| **Dairy Cattle :** | | | | | | |
| Milch Cows .. .. | Range of 1st quality | £22 to £29-10 | £23 to £30 | £23 to £30 | £23 to £30 | £23 to £32 |
| | ,, 2nd ,, | £17 to £21 | £17 to £22 | £18 to £22 | £18 to £22 | £18 to £22 |
| Springers .. .. | ,, 1st ,, | £21 to £26-10 | £22 to £27 | £21 to £25-15 | £21 to £25 | £21 to £25 |
| | ,, 2nd ,, | £17 to £20 | £17 to £21 | £17 to £20 | £17 to £20 | £17 to £20 |
| **Sheep and Lambs :** | | | | | | |
| Crossbred & White Ewes | Range of 1st quality | 24/– to 35/– | 26/– to 38/– | 25/– to 35/– | 28/– to 36/6 | 26/– to 38/– |
| | ,, 2nd ,, | 18/– to 27/6 | 20/– to 29/– | 20/– to 27/6 | 20/– to 28/6 | 22/– to 31/– |
| Blackface Ewes .. | ,, 1st ,, | 20/– to 27/– | 21/6 to 35/– | 21/– to 28/6 | 20/– to 28/6 | 23/– to 31/– |
| | ,, 2nd ,, | 14/– to 21/– | 12/– to 27/– | 14/– to 22/6 | 14/– to 22/– | 17/6 to 24/– |
| Crossbred & White Lambs | ,, 1st ,, | 30/– to 36/6 | 28/– to 38/– | 30/– to 42/– | 32/– to 41/– | 32/– to 43/– |
| | ,, 2nd ,, | 22/– to 29/– | 24/– to 29/– | 22/– to 32/– | 23/– to 33/– | 25/– to 34/– |
| Blackface Lambs .. | ,, 1st ,, | 16/– to 20/– | 7/– to 17/6 | 14/– to 17/– | 16/– to 23/6 | 15/– to 24/– |
| | ,, 2nd ,, | 12/– to 14/– | | 10/– to 15/– | 8/– to 16/– | 10/– to 17/– |
| Rams .. .. | ,, 1st ,, | 28/– to 41/– | 30/– to 40/– | 30/– to 41/– | 30/– to 45/– | 30/– to 41/– |
| | ,, 2nd ,, | 24/– to 31/– | 21/– to 30/– | 24/– to 32/6 | 25/– to 39/– | 22/6 to 34/– |

# PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of November, 1938.

| Date | Fair | Calves (under 9 months) | Store Cattle | Fat Cattle (18 months and over) | Springers | | Milch Cows | Feeding Lambs (under 12 months old) | Fat Lambs (under 12 months old) | Young Pigs |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Cows | Heifers | | | | |
| | | Per head £ s. | Per cwt. Live weight | Per cwt. Live wgt. | Per head £ s. | Per head £ s. | Per head £ s. | Per head £ s. | Per head £ s. | Per head £ s. |
| 1 | Omagh .. .. | 6 8/7 | 35/– to 40/– | 29/– | 17 5 | 16 10 | 16 10 | — | *1 5 | — |
| 2 | Londonderry .. | — | 30/– to 34/6 | 31/– | 19 0 | 16 0 | — | — | — | 1 7 |
| 2 | Rathfriland .. | 6 14/6 | 34/– to 37/6 | 32/– | 19 0 | 17 10 | 17 10 | — | *1 2/6 | 1 11/6 |
| | | | | | | | | | †0 17/3 | |
| 3 | Ballymoney .. | 6 8 | 36/6 to 38/3 | — | 18 0 | 16 5 | 15 10 | — | — | 1 10 |
| 4 | Moy .. .. | — | 33/– to 38/– | 31/– | 16 15 | 16 5 | 15 12/6 | — | *1 5 | — |
| 8 | Irvinestown .. | 6 17/6 | 34/– to 36/– | 29/– | 16 0 | 15 10 | 15 0 | *0 10 | — | 1 10 |
| 8 | Dungiven .. | — | 29/– to 35/– | 29/– | 12 0 | 15 0 | — | †0 18 | — | 1 7/6 |
| 9 | Crossgar .. .. | — | 35/– to 38/– | 32/– | 23 0 | — | — | — | — | 2 0 |
| 9 | Kilrea .. .. | 5 3/4 | 28/– to 36/– | 30/– | 19 0 | 18 0 | 17 0 | — | — | 1 7/6 |
| 10 | Enniskillen .. | 5 10 | 30/– to 34/– | 30/– | 16 10 | 14 10 | 15 0 | — | — | 1 12/6 |
| 11 | Ballygawley .. | — | 27/– to 37/6 | 29/– | 17 10 | — | 15 10 | *1 7/6 | — | 1 16 |
| 12 | Strabane .. .. | 5 10 | 34/– to 38/6 | 31/– | 16 0 | 14 0 | 13 10 | — | — | — |
| 16 | Lisnaskea .. | 5 10 | 30/– to 36/6 | 32/6 | 16 0 | 16 0 | 15 0 | *1 2 | — | 1 12 |
| 17 | Ballynahinch .. | — | 35/– to 38/– | 32/– | 20 0 | — | — | — | — | 2 0 |
| 19 | Portadown .. | 5 15/9 | 36/– to 38/– | 32/– | 20 0 | 16 0 | 18 0 | — | — | 1 15 |
| 21 | Camlough .. | 5 10 | 37/– to 42/– | 31/6 | 18 0 | 17 0 | 14 0 | — | *1 5 | — |
| 21 | Moneymore .. | 6 0/4 | 35/– to 39/– | 30/– | 17 0 | 14 15 | 15 0 | — | *1 16 | — |
| 22 | Fintona .. .. | 7 0/11 | 35/– to 40/– | 31/– | 17 0 | 15 10 | 15 10 | — | *1 10 | 1 11 |
| | | | | | | | | | †0 13 | |
| 24 | Antrim .. .. | 6 11/9 | 33/– to 36/– | 32/– | 26 10 | 19 10 | — | — | — | 1 10 |
| 25 | Castlederg .. | 6 5 | 34/– to 37/6 | 32/– | 16 0 | 14 15 | — | *1 2/6 | *1 8 | 1 10 |
| 25 | Killylea .. .. | — | 30/– to 38/6 | 33/– | 16 0 | — | 14 0 | *1 6/6 | — | — |
| 26 | Ballymena .. | 6 1/6 | 27/6 to 42/6 | — | 23 0 | 20 10 | 21 0 | — | — | 1 15 |

* Downs and Crossbred. † Mountain.

# SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods:—Months of November, 1938, October, 1938, November, 1937; eleven months ended 30th November, 1938, and 30th November, 1937.

| PORTS OF :— | CATTLE. | | | | | | SHEEP. | | | | PIGS. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fat | Stores | Milch Cows | Springers | Calves | Total | Fat | Stores | Lambs | Total | Fat | Stores | Total | Horses |
| Belfast .. .. | 6,516 | 9,503 | 1,509 | 93 | — | 17,621 | 8,488 | — | — | 8,488 | 12,550 | — | 12,550 | 100 |
| Larne .. .. | 31 | 1,069 | — | 5 | — | 1,105 | 2,774 | — | — | 2,774 | 6,451 | 120 | 6,571 | 20 |
| Londonderry .. .. | 195 | 6,177 | 56 | 81 | 141 | 6,650 | 4,098 | — | — | 4,098 | 414 | — | 414 | 3 |
| Newry .. .. | 82 | 139 | 6 | 5 | — | 232 | 143 | — | — | 143 | — | — | — | — |
| Total, November, 1938 | 6,824 | 16,888 | 1,571 | 184 | 141 | 25,608 | 15,503 | — | — | 15,503 | 19,415 | 120 | 19,535 | 123 |
| Total, October, 1938 .. | 4,750 | 21,075 | 1,983 | 257 | 147 | 28,212 | 21,990 | — | — | 21,990 | 5,858 | 54 | 5,912 | 99 |
| Total, November, 1937 | 5,303 | 15,047 | 1,712 | 126 | 295 | 22,483 | 7,994 | 1 | — | 7,995 | 13,083 | 268 | 13,351 | 142 |
| Total, 11 months ended 30th November, 1938 | 53,107 | 153,777 | 16,013 | 2,181 | 3,177 | 228,255 | 75,940 | 118 | 78,514 | 154,572 | 90,154 | 1,907 | 92,061 | 2,400 |
| Total, 11 months ended 30th November, 1937 | 53,397 | 175,494 | 17,036 | 2,120 | 4,069 | 252,116 | 51,037 | 392 | 78,398 | 129,827 | 121,236 | 2,802 | 124,038 | 2,976 |

# IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st October, 1938, and the ten months ended 31st October, 1938, with comparative figures for the corresponding periods in 1937. This information also includes trade with Eire across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

| COMMODITY. | IMPORTS. | | | | EXPORTS. | | | |
|---|---|---|---|---|---|---|---|---|
| | Month ended 31st October. | | Ten Months ended 31st October. | | Month ended 31st October. | | Ten Months ended 31st October. | |
| | 1938 | 1937 | 1938 | 1937 | 1938 | 1937 | 1938 | 1937 |
| Bacon .. .. .. Cwt. | 5,636 | 4,121 | 41,328 | 33,064 | 39,293 | 39,538 | 334,814 | 313,965 |
| Hams .. .. ,, | 1,118 | 1,337 | 14,304 | 15,379 | 14,696 | 11,909 | 120,687 | 102,923 |
| Pork .. .. ,, | 228 | 328 | 1,018 | 4,384 | 3,806 | 2,291 | 26,567 | 27,543 |
| Butter .. .. ,, | 16,838 | 14,626 | 165,267 | 179,682 | 332 | 672 | 3,347 | 3,395 |
| Eggs .. gt. hds. | 37,868 | 24,064 | 888,250 | 799,049 | 220,277 | 200,468 | 3,175,922 | 3,097,454 |
| Oat Products (inc. oatmeal) cwt. | 3,424 | 2,967 | 21,785 | 21,152 | 11,932 | 7,660 | 47,171 | 66,155 |
| Potatoes .. .. tons | 56 | 93 | 2,640 | 6,135 | *6,804 | *8,717 | *144,653 | *146,566 |
| Poultry .. .. cwts. | 335 | 188 | 2,091 | 2,558 | 14,398 | 13,313 | 147,156 | 156,948 |
| Grass Seeds .. ,, | 2,349 | 673 | 18,248 | 7,582 | 11,719 | 10,178 | 271,386 | 249,658 |
| Cream .. .. galls. | —— | —— | —— | —— | †24,276 | †28,977 | †241,807 | †514,736 |

* These figures represent the quantities of potatoes inspected by the Ministry of Agriculture for shipment.

† These figures compiled from the Monthly Trading Returns supplied by Creameries in Northern Ireland.

# ACCOUNT OF TRADE AT FAIRS.

As a general rule supplies of store cattle at last month's fairs were normal for the time of year. Trade opened quiet, but later the demand showed some improvement and prices tended to harden. A good proportion of the cattle showed quality and condition. Large stores in forward condition were bought for finishing at higher rates, whilst smaller animals for wintering also sold more readily at firm to dearer rates.

Fat cattle were generally in sufficient supply for requirements, and the quality and condition of the stock were well up to average. Trade at the beginning of November was fairly steady at about late rates, and as the month advanced the demand increased with a consequent hardening of values. Well-finished, handy-weight cattle, remained in foremost demand.

Dairy cattle continued to be offered in small to medium supply and of mixed qualities. The majority of these found a ready sale, and only the very rough types were difficult to sell. Prices were generally well maintained and changes were usually in seller's favour. Young springers and newly-calved cows were mostly favoured by buyers, and, for these, rates were firmer on the month.

The volume of trade in sheep and lambs at fair centres was small, and chiefly confined to fat animals. Fat lambs and sheep ready for butchering were in request by local victuallers at firm rates.

The demand for the medium supplies of young pigs was a quietly steady trade at most fairs. Prices remained at former levels at most centres, although a general tendency to weaken was noticeable. A small but fairly good business was transacted in brood sows. York and York crosses were the breeds most in demand, and prices for these were firm at from £6 to £9 per head. The general run of prices was from £6 to £11 5s. 0d. according to quality.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 21 fairs in Northern Ireland during the months of November and October, 1938, and November, 1937.

| Description of Live Stock. | November, 1938. | | October, 1938. | | November, 1937. | |
|---|---|---|---|---|---|---|
| | Number exposed for sale. | Number sold. | Number exposed for sale. | Number sold. | Number exposed for sale. | Number sold. |
| Store Cattle .. | 8,880 | 5,897 | 9,160 | 5,377 | 8,643 | 6,344 |
| Fat Cattle .. | 1,461 | 1,271 | 1,434 | 1,151 | 1,506 | 1,332 |
| Dairy Cattle .. | 1,550 | 1,109 | 1,710 | 1,291 | 1,233 | 1,030 |
| Sheep .. | 404 | 271 | 1,914 | 1,416 | 261 | 119 |
| Lambs .. | 612 | 413 | 3,045 | 1,368 | 715 | 442 |
| Young Pigs .. | 3,463 | 2,753 | 3,451 | 2,824 | 3,380 | 2,593 |

12th December, 1938.

This report is issued free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

## MINISTRY OF AGRICULTURE.

# List of Leaflets and other Publications.

### LEAFLETS.

No. 1. Flax Seed
" 2. Improvement of Farm Poultry.
" 3. Feeding for Egg Production.
" 5. The Dishorning of Calves.
" 6. The Packing of Apples in Standard Boxes.
" 7. Potato Trials.
" 9. The Renovation of Orchards.
" 10. Fruit Tree Pests—Capsid Bugs.
" 11. Fruit Tree Pests—Aphides and Apple Sucker.
" 12. Fruit Tree Pests—Caterpillars.
" 13. Contagious Abortion in Cattle.
" 14. Cheese-making on the Farm.
" 15. Suitable Varieties of Fruit.
" 16. The Feeding of Dairy Cows.
" 17. Home Bottling of Fruits and Vegetables.
" 18. Marketing of Dead Poultry.
" 19. How to Feed Linseed.
" 20. The Hatching and Rearing of Chickens.
" 21. The Uses and Advantages of Portable Poultry Houses.
" 22. Leather-jacket Grubs.
" 23. The Handling and Care of Wool.
" 24. Fluke in Sheep.
" 25. The Rearing and Management of Young Horses.
" 26. Ordnance Survey Maps for Farmers.
" 27. How to Keep Eggs Clean.
" 28. The Construction of a Laying House for Poultry.
" 29. The Selection and Breeding of Laying Hens.
" 31. Coccidiosis in Poultry.
" 32. Roup of Poultry (Fowl Pox).
" 33. Spraying Calendar for Apple Orchards.
" 34. The Pruning of Apple Trees.
" 35. The Fattening of Pigs.
" 36. Advantages of Milk Recording.
" 37. The Raising and Fattening of Turkeys.
" 38. The Destruction of Charlock.
" 39. The Production of Clean Milk.
" 40. The Laying Down and Management of Temporary Pastures.
" 41. Blackleg, Blackquarter or Quarterill.
" 42. The Purchase of Balanced Rations for Dairy Cows
" 43. Tuberculosis in Poultry.
" 44. Results of Crop Experiments.
45. The Breeding and Rearing of Pigs.
No. 46 Hints or Winter Egg Production.
" 47 The Care and Management of Sheep.
" 49. American Gooseberry Mildew.
" 50. Potato Blight.
" 51. Butter-making on the Farm.
" 52. Gapes in Chickens.
" 54. The Breeding and Rearing of Calves.
" 55. Destruction of Ragwort or Benweed.
" 56. Identification of Egg Supplies.
" 57. How to have Eggs of First Quality.
" 58. How the Fertilisers and Feeding Stuffs Act benefits the Farmer.
" 59. Bacillary White Diarrhoea (Pullorum Disease).
" 60. Advantages of Winter Agricultural Classes.
" 61. The Care and Management of Breeding Bulls.
" 62. The Production of Timber on the Farm.
" 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet.
" 64. The Destruction of Warble Fly Maggots in Cattle.
" 65. The Packing of Apples in Barrels.
" 66. Seed Testing Facilities for Traders.
" 67. The Cultivation of Vegetables.
" 68. The Cultivation of Strawberries.
" 69. The Construction of Piggeries.
" 70. Ringworm.
" 71. The Cultivation of Raspberries.
" 72. Tree Planting for Shelter and Ornament.
" 73. The Propagation and Maintenance of Healthy Stocks of Potatoes.
" 74. New Pure Strains of Flax.
" 75 Pig Production and the Pigs Marketing Scheme.
" 76. Acarine (Isle of Wight) Disease of Bees.
" 77. Licensing of Milk Producers and Distributors.
" 78. Graded Milk.
" 79. The Picking and Storing of Apples.
" 80. Hoose or Husk in Farm Stock.
" 81. The Construction of Cow Houses.
" 82. White Scour in Calves.
" 83. The Care, Management and Feeding of the Poultry Breeding Stock.
" 84. Lime and Liming.
" 85. The Growing of Trees.

### CIRCULARS.

No. 5. Why Pay a Tax on the Horns of Cattle ?
" 8. Basic Slag.
" 9. Smut in Oats.
" 10. Purchase of Fertilisers and Feeding Stuffs.
" 11. Fertilisers and Feeding Stuffs Act—General Summary.
" 12. The Treatment of Liver Fluke.
" 13. The ox-Warble Fly.
306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations.

### MISCELLANEOUS PUBLICATIONS.

Store Cattle.
Reports on Egg-Laying Tests.
Crop Insurance.
List of Growers of Certified Crops of Immune Varieties of Potatoes.
List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
The Ministry's Monthly Report.
Register of Premium Stallions.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

**Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.**

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.

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